

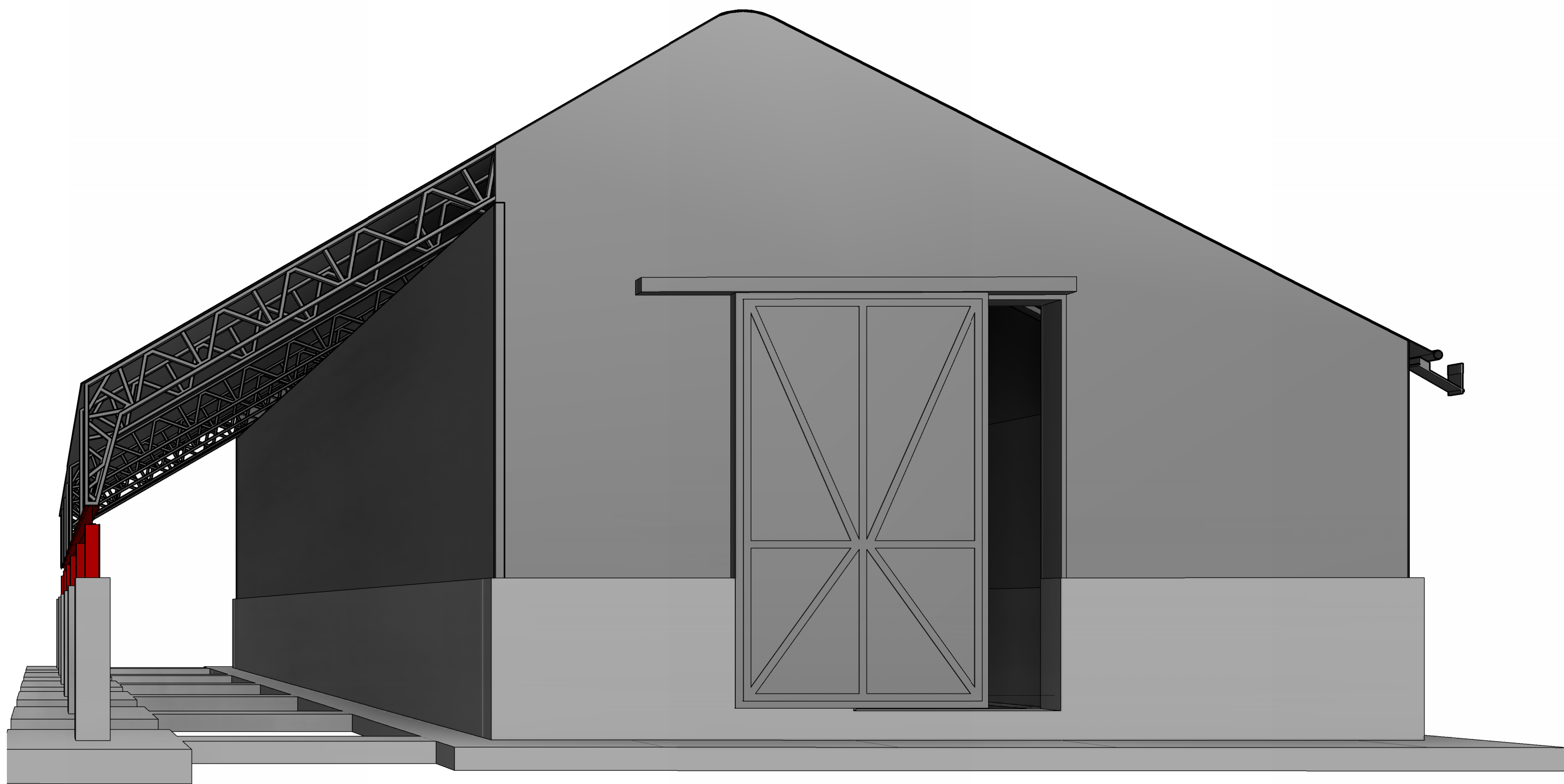


PHASE I - SALT SHED, FUEL ISLAND AND ASSOCIATED SITE WORK



PROJECT NO. ENG22-0465

225 CENTRAL STREET,
ABINGTON, MA 02351



DRAWING LIST	
GENERAL	
C001	COVER SHEET
CIVIL	
C001	GENERAL NOTES AND LEGEND
C101	EXISTING CONDITIONS PLAN
C201	SITE PREPARATION AND EROSION CONTROL DEMOLITION PLAN
C301	OVERALL SITE LAYOUT AND MATERIALS PLAN
C302	SITE LAYOUT AND MATERIALS PLAN PHASE I
C401	GRADING AND DRAINAGE PLAN
C501	UTILITY PLAN
C601	SITE DETAILS 1
C602	SITE DETAILS 2
C603	SITE DETAILS 3
STRUCTURAL	
SPW1001	SALT SHED GENERAL NOTES
SPW1101	SALT SHED FOUNDATION PLAN
SPW1201	SALT SHED ELEVATION
SPW1301	SALT SHED FOUNDATION SECTIONS & DETAILS I
SPW1302	SALT SHED FOUNDATION SECTIONS & DETAILS II
SPW1001	SALT SHED 3D VIEWS
ARCHITECTURAL	
APW1101	OVERALL SALT SHED FLOOR PLAN & ELEVATIONS
APW1102	SALT SHED SECTIONS & 3D VIEW
EQUIPMENT	
E0201	FUEL ISLAND PLAN AND ELEVATION
E0202	FUEL ISLAND DETAILS I
E0203	FUEL ISLAND DETAILS II
ELECTRICAL	
E0101	ELECTRICAL ABBREVIATIONS, NOTES, SYMBOLS AND DETAILS
E0100	SITE UTILITY PLAN
ELP100	ELECTRICAL LIGHTING AND POWER FLOOR PLAN
E202	ELECTRICAL RISER - FUEL ISLAND
E610	ELECTRICAL SCHEDULES AND DIAGRAMS

BIDDING

10/16/2024

KAESTLE BOOS ASSOCIATES, INC. KAESTLE BOOS ARCHITECTURAL, LANDSCAPE, & INTERIORS

WESTON & SAMPSON ENGINEERS, INC. WESTON & SAMPSON DPW ARCHITECTURAL & CIVIL ENGINEER

CONSULTING ENGINEERING SERVICES C&S MECHANICAL, PLUMBING & ELECTRICAL ENGINEER



Brian McQuinn

GENERAL NOTES

1. TOPOGRAPHICAL INFORMATION IS BASED ON AN ON THE GROUND SURVEY PERFORMED BY CHAPPELL ENGINEERING FROM JANUARY-FEBRUARY 2023. THE HORIZONTAL COORDINATES ARE BASED ON NAD 83, THE VERTICAL DATUM IS NAVD 88.
2. WETLAND FLAGS SET BY LEAH BASBANES AND LOCATED BY CHAPPELL ENGINEERING ASSOCIATES, LLC. BUFFER LINES PROVIDED BY KAESTLE BOOS ASSOCIATES, INC.
3. LOCATIONS OF ANY UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF SUCH UTILITIES, PROTECTING ALL EXISTING UTILITIES AND REPAIRING ANY DAMAGE DONE DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ON-SITE COORDINATION WITH UTILITY COMPANIES AND PUBLIC AGENCIES AND FOR OBTAINING ALL REQUIRED PERMITS AND PAYING ALL REQUIRED FEES. IN ACCORDANCE WITH M.G.L. CHAPTER 62, SECTION 40, INCLUDING AMENDMENTS, CONTRACTORS SHALL NOTIFY ALL UTILITY COMPANIES AND GOVERNMENT AGENCIES IN WRITING PRIOR TO EXCAVATION. CONTRACTOR SHALL ALSO CALL "DIG SAFE" AT (888) 344-7233 NO LESS THAN 72 HOURS, (EXCLUSIVE OF WEEKENDS AND HOLIDAYS), PRIOR TO SUCH EXCAVATION. DOCUMENTATION OF REQUESTS SHALL BE PROVIDED TO PROJECT REPRESENTATIVE PRIOR TO EXCAVATION WORK.
3. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
4. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY OWNER AT NO ADDITIONAL COST TO THE OWNER.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING ALL DRAWINGS AND SPECIFICATIONS TO DETERMINE THE EXTENT OF EXCAVATION AND DEMOLITION REQUIRED TO RECEIVE SITE IMPROVEMENTS.
6. ANY DISCREPANCIES OR CONFLICTS BETWEEN THE DRAWINGS AND EXISTING CONDITIONS, EXISTING CONDITIONS TO REMAIN, TEMPORARY CONSTRUCTION, PERMANENT CONSTRUCTION AND WORK OF ADJACENT CONTRACTS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER BEFORE PROCEEDING. ITEMS ENCOUNTERED IN AREAS OF EXCAVATION THAT ARE NOT INDICATED ON THE DRAWINGS, BUT ARE VISIBLE ON SURFACE, SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE REMOVED AT NO ADDITIONAL COST TO THE OWNER.
7. ANY ALTERATIONS TO THESE DRAWINGS MADE IN THE FIELD DURING CONSTRUCTION SHALL BE RECORDED BY THE GENERAL CONTRACTOR ON "AS-BUILT" DRAWINGS.
8. ALL AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS OUTSIDE THE PROJECT LIMITS, SHALL BE RESTORED TO THE ORIGINAL CONDITION BY THE CONTRACTOR AT NO ADDITIONAL COST AND TO THE SATISFACTION OF THE OWNER.
9. ALL WORK SHOWN ON THE PLANS AS BOLD SHALL REPRESENT PROPOSED WORK. THE TERM "PROPOSED (PROP)" INDICATES WORK TO BE CONSTRUCTED USING NEW MATERIALS OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE AND RESET (R&R)", OR REMOVE, RELOCATE, RESET, (R &R).
10. ALL KNOWN EXISTING STATE, COUNTY AND TOWN LOCATION LINES AND PRIVATE PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND ARE INDICATED ON THE PLANS.
11. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT HIS EMPLOYEES, AS WELL AS PUBLIC USERS FROM INJURY DURING THE ENTIRE CONSTRUCTION PERIOD USING ALL NECESSARY SAFEGUARDS, INCLUDING BUT NOT LIMITED TO, THE ERECTION OF TEMPORARY WALKS, STRUCTURES, PROTECTIVE BARRIERS, COVERING, OR FENCES AS NEEDED.
12. THE CONTRACTOR SHALL SUPPLY THE OWNER WITH THE NAME OF THE OSHA "COMPETENT PERSON" PRIOR TO CONSTRUCTION.
13. FILLING OF EXCAVATED AREAS SHALL NOT TAKE PLACE WITHOUT THE PRESENCE OR PERMISSION OF THE OWNER.
14. EXISTING TREES TO REMAIN SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITIES. NO STOCKPILING OF MATERIAL, EQUIPMENT OR VEHICULAR TRAFFIC SHALL BE ALLOWED WITHIN THE DRIP LINE OF TREES TO REMAIN. NO GUYS SHALL BE ATTACHED TO ANY TREE TO REMAIN. WHEN NECESSARY OR AS DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL ERECT TEMPORARY BARRIERS FOR THE PROTECTION OF EXISTING TREES DURING CONSTRUCTION.
15. TREES AND SHRUBS WITHIN THE LIMITS OF WORK SHALL BE REMOVED ONLY UPON THE APPROVAL OF THE ENGINEER OR AS NOTED ON THE PLANS.
16. NO FILLING SHALL OCCUR AROUND EXISTING TREES TO REMAIN WITHOUT THE APPROVAL OF THE OWNER OR OWNER REPRESENTATIVE.
17. THE CONTRACTOR SHALL REMOVE ALL SURFACE VEGETATION PRIOR TO GRADING THE SITE. TEMPORARY EROSION CONTROL MEASURES SHOWN ON THE DRAWINGS (INCLUDING SILT FENCE AND COMPOSITE FILTER TUBES) SHALL BE INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THESE TEMPORARY EROSION CONTROL MEASURES THROUGHOUT THE PROJECT WHICH COST SHALL BE INCIDENTAL TO THE PROJECT.
18. ALL SURPLUS AND/OR UNSUITABLE MATERIAL FROM CONSTRUCTION ACTIVITIES SHALL BE DISPOSED OF BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE TOWN IN ACCORDANCE WITH SPECIFICATION 02 61 00 16 - HANDLING, TRANSPORTATION, REUSE AND OFF-SITE DISPOSAL OF SURPLUS EXCAVATED MATERIAL. SUITABLE SOIL EXCAVATION AS PART OF THE PROJECT MUST MEET ONE OR MORE OF THE MATERIAL REQUIREMENTS SPECIFIED IN 31 00 00 - EARTHWORK. ON-SITE FILL MATERIALS, WHICH DO NOT CONFORM TO SPEC 31 00 00, SHALL NOT BE USED BELOW ANY SITE ELEVATION. IF THE CONTRACTOR PROPOSES TO USE THE EXISTING FILL ON SITE BELOW PAVEMENT AREAS, OR FOR THE EXISTING BERM, IT MUST BE DEMONSTRATED THAT THE FILL MEETS THE REQUIREMENTS PER 31 00 00. ALL EXCAVATED FILL MATERIAL WHICH DOES NOT MEET THE REQUIREMENTS OF THE CONTRACT DOCUMENTS SHALL BE REMOVED AND DISPOSED OF OFF-SITE AT NO ADDITIONAL COST TO THE OWNER IN ACCORDANCE WITH SPECIFICATION 02 61 00 16.
19. CONTRACTOR IS RESPONSIBLE FOR STAKING CONSTRUCTION BASELINES IN FIELD. NO CONSTRUCTION WILL BE PERFORMED WITHOUT THE PROPOSED BASELINES AND LAYOUTS APPROVED BY THE ENGINEER.
20. NO FILL SHALL CONTAIN HAZARDOUS MATERIALS.
21. CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AROUND PERIMETER OF WORK AREA (LIMIT OF WORK), FENCE SHALL NOT IMPEDE TRAVEL WAYS.
22. ANY QUANTITIES SHOWN ON PLANS ARE FOR COMPARATIVE BIDDING PURPOSES ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE PROJECT SITE TO VERIFY ALL QUANTITIES AND CONDITIONS PRIOR TO SUBMITTING BID.
23. ALL EXISTING DRAINAGE FACILITIES TO REMAIN SHALL BE MAINTAINED FREE OF DEBRIS, SOIL, SEDIMENT, AND FOREIGN MATERIAL AND OPERATIONAL THROUGHOUT THE LIFE OF THE CONTRACT. REMOVE ALL SOIL, SEDIMENT, DEBRIS AND FOREIGN MATERIAL FROM ALL DRAINAGE STRUCTURES, INCLUDING BUT NOT LIMITED TO, DRAINAGE INLETS, MANHOLES AND CATCH BASINS WITHIN THE LIMIT OF WORK AND DRAINAGE STRUCTURES OUTSIDE THE LIMIT OF WORK THAT ARE IMPACTED BY THE WORK FOR THE ENTIRE DURATION OF CONSTRUCTION.
24. CONTRACTOR'S STAGING AREA MUST BE WITHIN THE CONTRACT LIMIT LINE AND IN AREAS APPROVED BY OWNER. ANY OTHER AREAS THAT THE CONTRACTOR MAY WISH TO USE FOR STAGING MUST BE COORDINATED WITH THE OWNER.
25. THE CONTRACTOR SHALL KEEP ALL STREETS, PARKING LOTS AND SIDEWALKS THAT ARE NOT RESTRICTED FROM PUBLIC USE DURING CONSTRUCTION BROOM CLEAN AT ALL TIMES. THE CONTRACTOR SHALL USE ACCEPTABLE METHODS AND MATERIALS TO MAINTAIN ADEQUATE DUST CONTROL THROUGHOUT CONSTRUCTION.
26. CONTRACTOR SHALL COORDINATE ALL WORK WITH THE OWNER.
27. CONTRACTOR SHALL DEWATER AS NECESSARY TO PERFORM THE PROPOSED WORK. SEE SPECIFICATION SECTION 003132 SUBSURFACE DATA).
28. THE LIMIT OF WORK SHALL BE DELINEATED IN THE FIELD PRIOR TO THE START OF SITE CLEARING OR CONSTRUCTION.
29. DEEP SUMP CATCH BASINS AND STORMWATER BASIN SHALL BE CLEANED FOLLOWING CONSTRUCTION AND SHALL FOLLOW THE OPERATION AND MAINTENANCE PLAN THEREAFTER.
30. HAULING OF EARTH MATERIALS TO AND FROM THE SITE SHALL BE RESTRICTED TO THE HOURS OF 7 AM TO 4 PM MONDAY THROUGH FRIDAY.
31. ANY BOULDERS 3 CY OR SMALLER SHALL BE CONSIDERED UNDOCUMENTED FILL AND SHALL BE DISPOSED OF AT NO ADDITIONAL COST TO THE TOWN.
32. WORK ON SATURDAYS SHALL ONLY BE CONDUCTED IF PRIOR WRITTEN PERMISSION IS PROVIDED BY THE OWNER.
33. THE TERM "AS DIRECTED" AS USED IN THE CONTRACT DRAWINGS SHALL BE REPLACED WITH "AS REQUIRED".

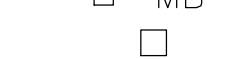
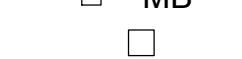
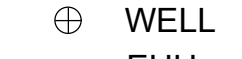
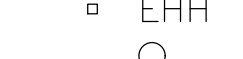
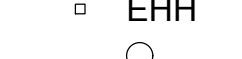
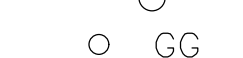
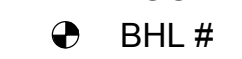
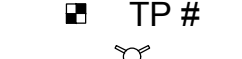
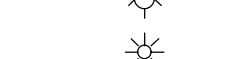
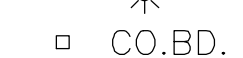
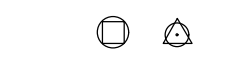
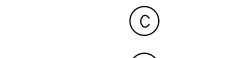
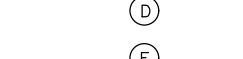
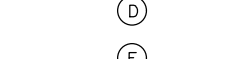
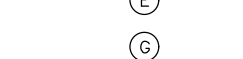
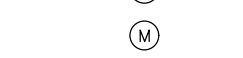
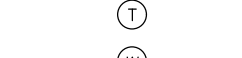
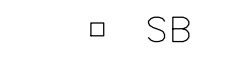
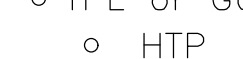
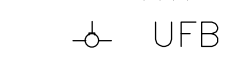
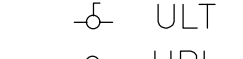
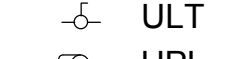
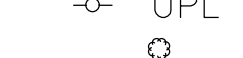
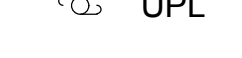
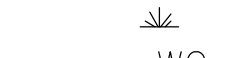
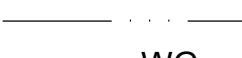
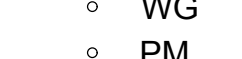
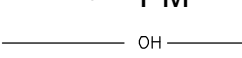
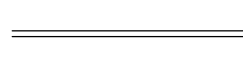
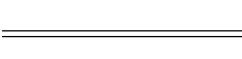
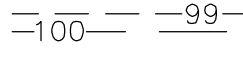
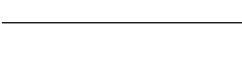
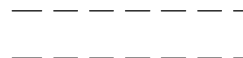
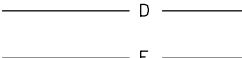
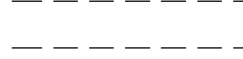
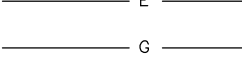
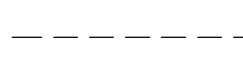
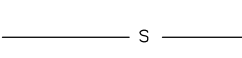
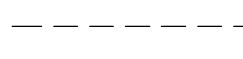
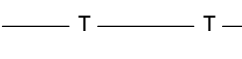
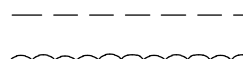
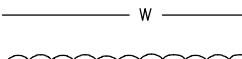
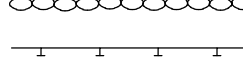
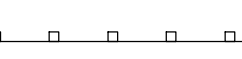
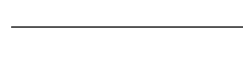
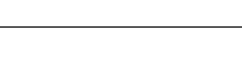
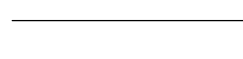
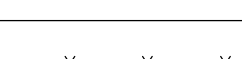
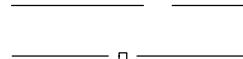
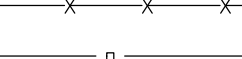
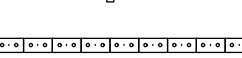
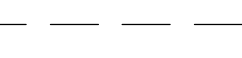
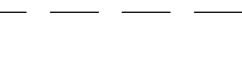
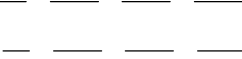
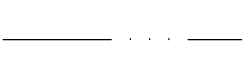
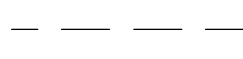
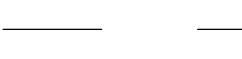
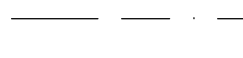
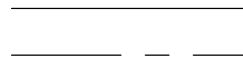
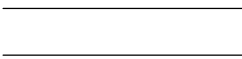
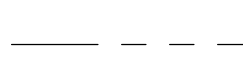
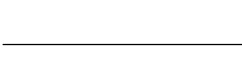
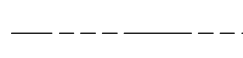
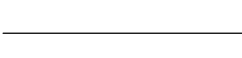
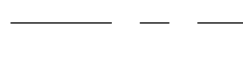
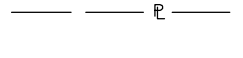
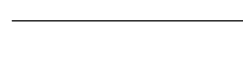
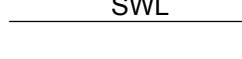
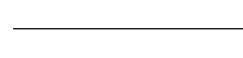
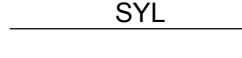
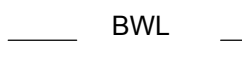
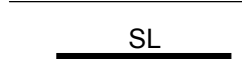
EROSION AND SEDIMENT CONTROL NOTES

1. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE PUT INTO PLACE PRIOR TO BEGINNING ANY CONSTRUCTION OR DEMOLITION. REFER TO PLAN FOR APPROXIMATE LOCATION OF EROSION AND SEDIMENT CONTROL. REFER TO SPECS AND DETAILS FOR TYPE OF EROSION AND SEDIMENT CONTROL.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTINUAL MAINTENANCE OF ALL CONTROL DEVICES THROUGHOUT THE DURATION OF THE PROJECT.
3. CONTRACTOR SHALL MEET ALL OF THE STATE OF MASSACHUSETTS D.E.P. AND THE TOWN OF ABINGTON WETLANDS PROTECTION REGULATIONS FOR SEDIMENT AND EROSION CONTROL.
4. EXCAVATED MATERIAL STOCKPILED ON THE SITE SHALL BE SURROUNDED BY A RING OF UNBROKEN SEDIMENT AND EROSION CONTROL FENCE. THE LIMITS OF ALL GRADING AND DISTURBANCE SHALL BE KEPT TO A MINIMUM WITHIN THE APPROVED AREA OF CONSTRUCTION. ALL AREAS OUTSIDE OF THE LIMIT OF CONTRACT SHALL REMAIN TOTALLY UNDISTURBED UNLESS OTHERWISE APPROVED BY OWNER'S REPRESENTATIVE.
5. ALL CATCH BASINS, DRAIN GRATES, AND CURB INLETS WITHIN OR ADJACENT TO THE PROJECT LIMITS SHALL BE PROTECTED WITH INLET SEDIMENT CONTROL DURING THE ENTIRE DURATION OF CONSTRUCTION.
6. SEDIMENT CONTROL BARRIERS TO BE INSTALLED AT THE TOE OF SLOPES. SEE GRADING & DRAINAGE PLANS, NOTES, DETAILS AND SPECIFICATIONS.
7. ANY AREA OUTSIDE THE PROJECT LIMIT THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO THE OWNER.
8. THE CONTRACTOR SHALL PROVIDE DUST CONTROL FOR CONSTRUCTION OPERATIONS AS APPROVED BY OWNER.
9. ALL POINTS OF CONSTRUCTION EGRESS OR INGRESS SHALL BE MAINTAINED TO PREVENT TRACKING OR FLOWING OF SEDIMENT ON TO PUBLIC/PRIVATE ROADS.
1. ALL WORK RELATING TO INSTALLATION, RENOVATION OR MODIFICATION OF WATER, DRAINAGE AND/OR SEWER SERVICES SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS OF THE TOWN OF ABINGTON.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND GRADES ON THE GROUND AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE OWNER.
3. ALL GRADING IS TO BE SMOOTH AND CONTINUOUS WHERE PROPOSED GRAVEL SURFACE MEETS EXISTING SURFACE. BLEND THE TWO PAVEMENTS AND ELIMINATE ROUGH SPOTS AND ABRUPT GRADE CHANGES AND MEET LINE AND GRADE OF EXISTING CONDITIONS WITH NEW IMPROVEMENTS.
4. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE (1.5% MINIMUM) AWAY FROM ALL BUILDING FOUNDATIONS AND STRUCTURES.
5. CONTRACTOR SHALL ENSURE ALL AREAS ARE PROPERLY PITCHED TO DRAIN, WITH NO SURFACE WATER PONDING OR PUDDLING.
6. ALL NEW WALKWAYS / ACCESS PATHS MUST CONFORM TO CURRENT AMERICANS WITH DISABILITIES ACT (ADA) REGULATIONS: WALKWAYS SHALL MAINTAIN A CROSS PITCH OF NOT MORE THAN ONE AND A HALF PERCENT (1.5%) AND THE RUNNING SLOPE (PARALLEL TO THE DIRECTION OF TRAVEL) BETWEEN 1% MIN. AND 5% MAX.
7. MINIMUM SLOPE ON ALL WALKWAYS WILL BE 1:100 OR 1% TO PROVIDE POSITIVE DRAINAGE. ANY DISCREPANCIES NOT ALLOWING THIS TO OCCUR SHALL BE REPORTED TO THE ENGINEER PRIOR TO CONTINUING WORK.
8. ALL UTILITY GRATES, COVERS OR OTHER SURFACE ELEMENTS INTENDED TO BE EXPOSED AT GRADE SHALL BE FLUSH WITH THE ADJACENT FINISHED GRADE AND ADJUSTED TO PROVIDE A SMOOTH TRANSITION AT ALL EDGES.
9. THE CONTRACTOR SHALL SET SUBGRADE ELEVATIONS TO ALLOW FOR POSITIVE DRAINAGE AND PROVIDE EROSION CONTROL DEVICES, STRUCTURES, MATERIALS AND CONSTRUCTION METHODS TO DIRECT SILT MIGRATION AWAY FROM DRAINAGE AND OTHER UTILITY SYSTEMS, PUBLIC/PRIVATE STREETS AND WORK AREAS. CLEAN BASINS REGULARLY AND AT THE END OF THE PROJECT.
10. EXCAVATION REQUIRED WITHIN PROXIMITY OF KNOWN EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT NO COST TO THE OWNER.
11. WHERE NEW EARTHWORK MEETS EXISTING EARTHWORK, CONTRACTOR SHALL BLEND NEW EARTHWORK SMOOTHLY INTO EXISTING, PROVIDING VERTICAL CURVES OR ROUNDS AT ALL TOP AND BOTTOM OF SLOPES.
12. WHERE A SPECIFIC LIMIT OF WORK LINE IS NOT OBVIOUS OR IMPLIED, BLEND GRADES TO EXISTING CONDITIONS WITHIN 5 FEET OF PROPOSED CONTOURS.
13. RESTORE ALL DISTURBED AREAS AND LIMITS OF ALL REMOVALS TO LOAM AND SEED (L&S) UNLESS OTHERWISE NOTED.
14. SEE EARTHWORK SECTION OF SPECIFICATIONS FOR SPECIFIC EXCAVATION AND FILLING PROCEDURES.
15. FOR STRUCTURE REMODELING (REMOD), CONSTRUCTION METHODS SHALL FOLLOW MASSACHUSETTS DOT STANDARD SPEC. LATEST EDITION (SECTION 220).
1. THE CONTRACTOR SHALL INCLUDE IN THE BID THE COST OF REMOVING ANY EXISTING SITE FEATURES AND APPURTENANCES NECESSARY TO ACHIEVE THE CONSTRUCTION OF THE PROPOSED SITE IMPROVEMENTS. THE CONTRACTOR SHALL ALSO INCLUDE IN THE BID THE COST NECESSARY TO RESTORE SUCH ITEMS IF THEY ARE SCHEDULED TO REMAIN AS PART OF THE FINAL SITE IMPROVEMENTS. REFER TO PLANS TO DETERMINE EXCAVATION, DEMOLITION AND TO DETERMINE THE LOCATION OF THE PROPOSED SITE IMPROVEMENTS.
2. THE OWNER RESERVES THE RIGHT TO REVIEW ALL MATERIALS DESIGNATED FOR REMOVAL AND TO RETAIN OWNERSHIP OF SUCH MATERIALS. IF THE OWNER RETAINS ANY MATERIAL, THE CONTRACTOR SHALL MAKE ARRANGEMENTS WITH THE OWNER TO HAVE THOSE MATERIALS REMOVED OFF SITE AT NO ADDITIONAL COST.
3. UNLESS SPECIFICALLY NOTED TO BE SAVED / STOCKPILED (R&S) OR REUSED / RELOCATED (R&R), ALL SITE FEATURES CALLED FOR REMOVAL (REM) SHALL BE REMOVED WITH THEIR FOOTINGS, ATTACHMENTS, BASE MATERIAL, ETC. TRANSPORTED FROM THE SITE TO BE DISPOSED OF IN A LAWFUL MANNER AT AN ACCEPTABLE DISPOSAL SITE AND AT NO COST TO THE OWNER.
4. ALL EXISTING SITE FEATURES TO REMAIN SHALL BE PROTECTED THROUGHOUT THE CONSTRUCTION PERIOD. ANY FEATURES DAMAGED DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST.
5. DURING EARTHWORK OPERATIONS, CONTRACTOR SHALL TAKE CARE TO NOT DISTURB EXISTING MATERIALS TO REMAIN, OUTSIDE THE LIMITS OF EXCAVATION AND BACKFILL AND SHALL TAKE WHATEVER MEASURES NECESSARY, AT THE CONTRACTOR'S EXPENSE, TO PREVENT ANY EXCAVATED MATERIAL FROM COLLAPSING. ALL BACKFILL MATERIALS SHALL BE PLACED AND COMPACTED AS SPECIFIED TO THE SUBGRADE REQUIRED FOR THE INSTALLATION OF THE REMAINDER OF THE CONTRACT WORK.
6. IT SHALL BE THE CONTRACTOR'S OPTION, WITH CONCURRENCE OF THE OWNER, TO REUSE EXISTING GRAVEL IF IT MEETS THE REQUIREMENTS OF THE SPECIFICATIONS FOR GRAVEL BORROW.
7. ALL ITEMS CALLED FOR REMOVAL SHALL BE REMOVED TO FULL DEPTH INCLUDING ALL FOOTINGS, FOUNDATIONS, AND OTHER APPURTENANCES, EXCEPT AS SPECIFICALLY NOTED OTHERWISE.
8. 'CLEAR AND GRUB VEGETATION' SHALL INCLUDE REMOVAL OF GRASS, SHRUBS, AND UNDERBRUSH, REMOVAL OF ROOTS, ROUGH GRADING, INSTALLATION OF LOAM (IF APPLICABLE), FINE GRADING, SEEDING AND TURF ESTABLISHMENT BY THE CONTRACTOR.
9. TREES DESIGNATED FOR REMOVAL SHALL BE TAGGED BY CONTRACTOR AND APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF CONSTRUCTION.
10. THE STORAGE OF MATERIALS AND EQUIPMENT WILL BE PERMITTED AT LOCATIONS DESIGNATED BY OWNER OR OWNER'S REPRESENTATIVE. PROTECTION OF STORED MATERIALS AND EQUIPMENT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
11. STRIP & STORE EXISTING TOPSOIL FOR LATER REUSE WHERE APPROPRIATE, AND AS NOTED ON PLAN, WITH APPROPRIATE EROSION AND SEDIMENT CONTROLS.
12. THE CONTRACTOR SHALL PROTECT EXISTING TREES TO REMAIN, CONTRACTOR SHALL INSTALL TREE PROTECTION BARRIER AFTER CLEARING UNDERBRUSH AND TAKE DUE CARE TO PREVENT INJURY TO TREES DURING CLEARING OPERATIONS.

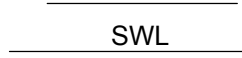
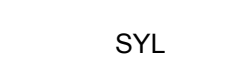
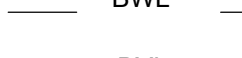
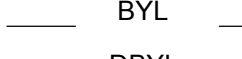
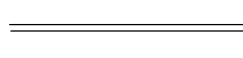
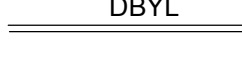
LAYOUT & MATERIALS NOTES

1. REFER TO EXISTING CONDITIONS PLANS FOR SURVEY INFORMATION (SHEETS EC0.00 AND EX-1-0 THROUGH EX-1-11).
2. COORDINATE ALL LAYOUT ACTIVITIES WITH THE SCOPE OF WORK CALLED FOR BY DEMOLITION, GRADING AND UTILITIES OPERATIONS ENCOMPASSED BY THIS CONTRACT. SET, PROTECT AND REPLACE REFERENCE STAKES AS NECESSARY OR AS REQUIRED BY THE OWNER'S REPRESENTATIVE.
3. ALL WORK SHALL BE PERFORMED BY CONTRACTOR UNLESS SPECIFICALLY INDICATED THAT THE WORK WILL BE PERFORMED "BY OWNER".
4. THE LAYOUT OF SITE AMENITIES AND FENCES MUST BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
5. THE LAYOUT OF ALL NEW PATHWAYS / WALKWAYS AND THE GRADING OF ALL SLOPES AND CROSS SLOPES SHALL CONFORM TO THE COMMONWEALTH OF MASSACHUSETTS RULES AND REGULATIONS FOR HANDICAP ACCESS CMR 921, AND THE AMERICANS WITH DISABILITIES ACT (ADA), TITLE 3. THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY OF ANY DISCREPANCIES BETWEEN ACTUAL CONDITIONS AND THOSE REQUIRED.
6. ALL LAYOUT LINES, OFFSETS, OR REFERENCES TO LOCATING OBJECTS ARE EITHER PARALLEL OR PERPENDICULAR UNLESS OTHERWISE DESIGNATED WITH ANGLE OFFSETS NOTED.
7. ALL PROPOSED SITE FEATURES SHALL BE LAID OUT AND STAKED FOR REVIEW AND APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF INSTALLATION, ANY REQUIRED ADJUSTMENTS TO THE LAYOUT SHALL BE UNDERTAKEN AS DIRECTED, AT NO ADDITIONAL COST TO THE OWNER.
8. ALL PROPOSED PAVEMENTS SHALL MEET THE LINE AND GRADE OF EXISTING ADJACENT PAVEMENT. SURFACES AND SHALL BE TREATED WITH AN RS-1 TACK COAT AT POINT OF CONNECTION. ALL PATHWAY WIDTHS SHALL BE AS NOTED ON THE LAYOUT AND MATERIALS PLAN.
9. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND GRADES ON THE GROUND AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE OWNER.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD MEASUREMENT OF ALL PROPOSED FENCES AND GATES.
11. THE DEPTH OF LOAM BORROW FOR ALL PROPOSED LAWN AREAS SHALL BE 6" MINIMUM. ALL DISTURBED AREAS SHALL BE RESTORED WITH LOAM AND SEED UNLESS OTHERWISE NOTED
12. ALL REFERENCES TO LOAM AND SEED (L&S) REFER TO HYDROMULCH SEEDED LAWN.
13. REFER TO DETAIL DRAWINGS FOR CONSTRUCTION DETAILS.

GENERAL SYMBOLS

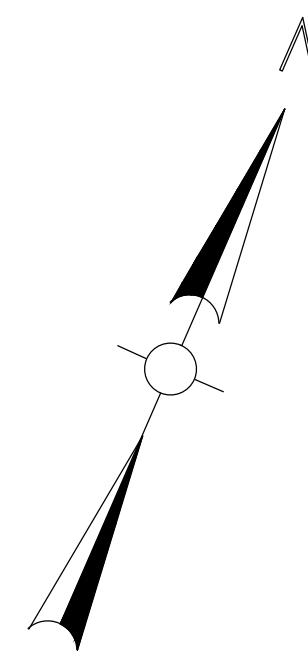
EXISTING	PROPOSED	DESCRIPTION
		CATCH BASIN
		FLAG POLE
		GAS PUMP
		MAIL BOX
		POST SQUARE
		POST CIRCULAR
		WELL
		ELECTRIC HANDHOLE
		FENCE GATE POST
		GAS GATE
		BORING HOLE
		MONITORING WELL
		TEST PIT
		HYDRANT
		LIGHT POLE
		COUNTY BOUND
		GPS POINT
		CABLE MANHOLE
		DRAINAGE MANHOLE
		ELECTRIC MANHOLE
		GAS MANHOLE
		MISC MANHOLE
		SEWER MANHOLE
		TELEPHONE MANHOLE
		WATER MANHOLE
		MASSACHUSETTS HIGHWAY BOUND
		MONUMENT
		STONE BOUND
		TOWN OR CITY BOUND
		TRAVERSE OR TRIANGULATION STATION
		TROLLEY POLE OR GUY POLE
		TRANSMISSION POLE
		UTILITY POLE W/ FIREBOX
		UTILITY POLE WITH DOUBLE LIGHT
		UTILITY POLE W / 1 LIGHT
		UTILITY POLE
		BUSH
		TREE
		STUMP
		WETLAND
		WATER GATE
		PARKING METER
		OVERHEAD CABLE/WIRE
		CURBING
		CONTOURS (ON-THE-GROUND SURVEY DATA)
		UNDERGROUND DRAIN PIPE
		UNDERGROUND ELECTRIC DUCT
		UNDERGROUND GAS MAIN
		UNDERGROUND SEWER MAIN
		UNDERGROUND TELEPHONE DUCT
		UNDERGROUND WATER MAIN
		BALANCED STONE WALL
		GUARD RAIL - STEEL POSTS
		GUARD RAIL - WOOD POSTS
		GUARD RAIL - DOUBLE FACE - STEEL POSTS
		GUARD RAIL - DOUBLE FACE - WOOD POSTS
		CHAIN LINK OR METAL FENCE
		WOOD FENCE
		SEDIMENT CONTROL BARRIER
		TREE LINE
		SAWCUT LINE
		TOP OR BOTTOM OF SLOPE
		LIMIT OF EDGE OF PAVEMENT OR COLD PLANE AND OVERLAY
		BANK OF RIVER OR STREAM
		BORDER OF WETLAND
		100 FT WETLAND BUFFER
		200 FT RIVERFRONT BUFFER
		STATE HIGHWAY LAYOUT
		TOWN OR CITY LAYOUT
		COUNTY LAYOUT
		RAILROAD SIDELINE
		TOWN OR CITY BOUNDARY LINE
		PROPERTY LINE OR APPROXIMATE PROPERTY LINE
		EASEMENT

PAVEMENT MARKINGS SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		SOLID WHITE LINE
		SOLID YELLOW LINE
		BROKEN WHITE LINE
		BROKEN YELLOW LINE
		DOUBLE YELLOW LINE
		STOP LINE

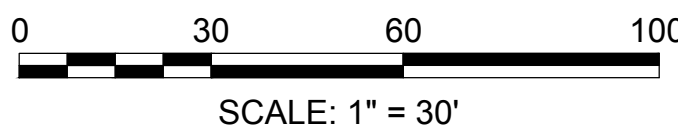
ABBREVIATIONS

GENERAL	
AADT	ANNUAL AVERAGE DAILY TRAFFIC
ABAN	ABANDON
ADJ	ADJUST
APPROX.	APPROXIMATE
A.C.	ASPHALT CONCRETE
BIT.	BITUMINOUS
BC	BOTTOM OF CURB
BD.	BOUND
BL	BASELINE
BLDG	BUILDING
BM	BENCHMARK
BO	BY OTHERS
BOS	BOTTOM OF SLOPE
BR.	BRIDGE
CB	CATCH BASIN
CBCI	CATCH BASIN WITH CURB INLET
CC	CEMENT CONCRETE
CCM	CEMENT CONCRETE MASONRY
CEM	CEMENT
CI	CURB INLET
CIP	CAST IRON PIPE
CLF	CHAIN LINK FENCE
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CO.	COUNTY
CONC	CONCRETE
CONT	CONTINUOUS
CONST	CONSTRUCTION
DHV	DESIGN HOURLY VOLUME
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DRIVEWAY	DRIVEWAY
ELEV (or EL.)	ELEVATION
EOP	EDGE OF PAVEMENT
EXIST (or EX)	EXISTING
EXC	EXCAVATION
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
FDN.	FOUNDATION
FOLDSTN	FIELDSTONE
GAR	GARAGE
GD	GROUND
GG	GAS GATE
GI	GUTTER INLET
GIP	GALVANIZED IRON PIPE
GRAN	GRANITE
GRAV	GRAVEL
GRD	GUARD
HDW	HEADWALL
HMA	HOT MIX ASPHALT
HOR	HORIZONTAL
HYD	HYDRANT
INV	INVERT
JUNCT	JUNCTION
L	LENGTH OF CURVE
LP	LIGHT POLE
LT	LEFT
MAX	MAXIMUM
MB	MAILBOX
MH	MANHOLE
MHB	MASSACHUSETTS HIGHWAY BOUND
MINIM	MINIMUM
NIC	NOT IN CONTRACT
NO.	NUMBER
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
P.G.L.	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
POC	POINT ON CURVE
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVATURE
PROJ	PROJECT
PROP	PROPOSED
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT
R	RADIUS OF CURVATURE
R&D	REMOVE AND DISPOSE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDWY	ROADWAY
REM	REMOVE
RET	RETAIN
RET WALL	RETAINING WALL
ROW	RIGHT OF WAY
RR	RAILROAD
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
RT	RIGHT
SB	STONE BOUND
SHLD	SHOULDER
SMH	SEWER MANHOLE
ST	STREET
STA	STATION
SSD	STOPPING SIGHT DISTANCE
SHLO	STATE HIGHWAY LAYOUT LINE
SW	SIDEWALK
T	TANGENT DISTANCE OF CURVE
TAN	TANGENT
TEMP	TEMPORARY
TC	TOP OF CURB
TOS	TOP OF SLOPE
TYP	TYPICAL
UP	UTILITY POLE
VAR	VARIES
VERT	VERTICAL
VC	VERTICAL CURVE
WCR	WHEEL CHAIR RAMP
WG	WATER GATE
WM	WATER METER/WATER MAIN
X-SECT	CROSS SECTION



NOTES:

- 1) THE INFORMATION SHOWN HEREON IS BASED ON AN ON-THE-GROUND SURVEY PERFORMED BY CHAPPELL ENGINEERING ASSOCIATES FROM JANUARY-FEBRUARY 2023.
- 2) THE HORIZONTAL COORDINATES ARE BASED ON NAD 83. THE VERTICAL DATUM IS NAVD 88.
- 3) TEST PITS TP-1 THROUGH TP-14 AND BORINGS B-1 THROUGH B-11 WERE OBSERVED BY LAHLAF GEOTECHNICAL CONSULTING, INC. ON 1/19/23 THROUGH 1/23/23.
- 4) TEST PITS SW-1 THROUGH SW-6 WERE OBSERVED BY LAHLAF GEOTECHNICAL CONSULTING, INC. ON 7/17/24.
- 5) ALL UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE ONLY AND WERE COMPILED ACCORDING TO AVAILABLE RECORD PLANS FROM THE VARIOUS UTILITY COMPANIES AND PUBLIC AGENCIES. ACTUAL LOCATIONS MUST BE DETERMINED IN THE FIELD.
- 6) PROPERTY LINE INFORMATION SHOWN IS CALCULATED FROM FIELD OBSERVATIONS, CITY OF ABINGTON, MASS. RECORDS AND PLANS & DEEDS RECORDED AT THE PLYMOUTH COUNTY REGISTRY OF DEEDS.



KAESTLE BOOS
associates, inc

416 Slater Road, New Britain, CT 06053
Phone: 860-229-0361 A Fax: 860-229-5303
Additional offices located in Massachusetts and Rhode Island
Email: kba@kba-architects.com A Web: www.kba-architects.com

Consultants:

Weston & Sampson
Engineers, Inc.

100 Foxborough Boulevard, Suite 250
Foxborough, MA 02035
978.532.1900 800.SAMPSON

www.westonandsampson.com

CES
Consulting Engineering
Services, LLC

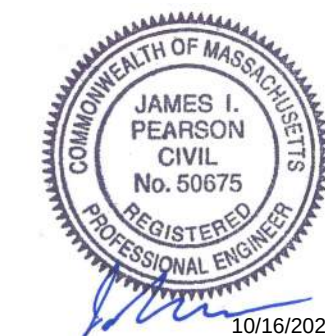
128 Carnegie Row, Ste. 104
Norwood MA 02062
617.261.7161
ceseng.com
CES #2021530.00

CHAPPELL
ENGINEERING
ASSOCIATES, LLC

CHAPPELL ENGINEERING ASSOCIATES
201 BOSTON POST ROAD WEST, SUITE 101
MARLBOROUGH, MA 01752
OFFICE: (508) 451-7000

DATE	ISSUE DATE	DESCRIPTION
10/16/2024		BIDDING

DATE	REVISIONS	DESCRIPTION
------	-----------	-------------



**PHASE I - SALT
SHED, FUEL ISLAND
AND ASSOCIATED
SITE WORK**
225 CENTRAL STREET
ABINGTON, MA, 02351

PROJECT NO.: ENGG2-0465 DRAWN BY: CTP

**EXISTING
CONDITIONS
PLAN**

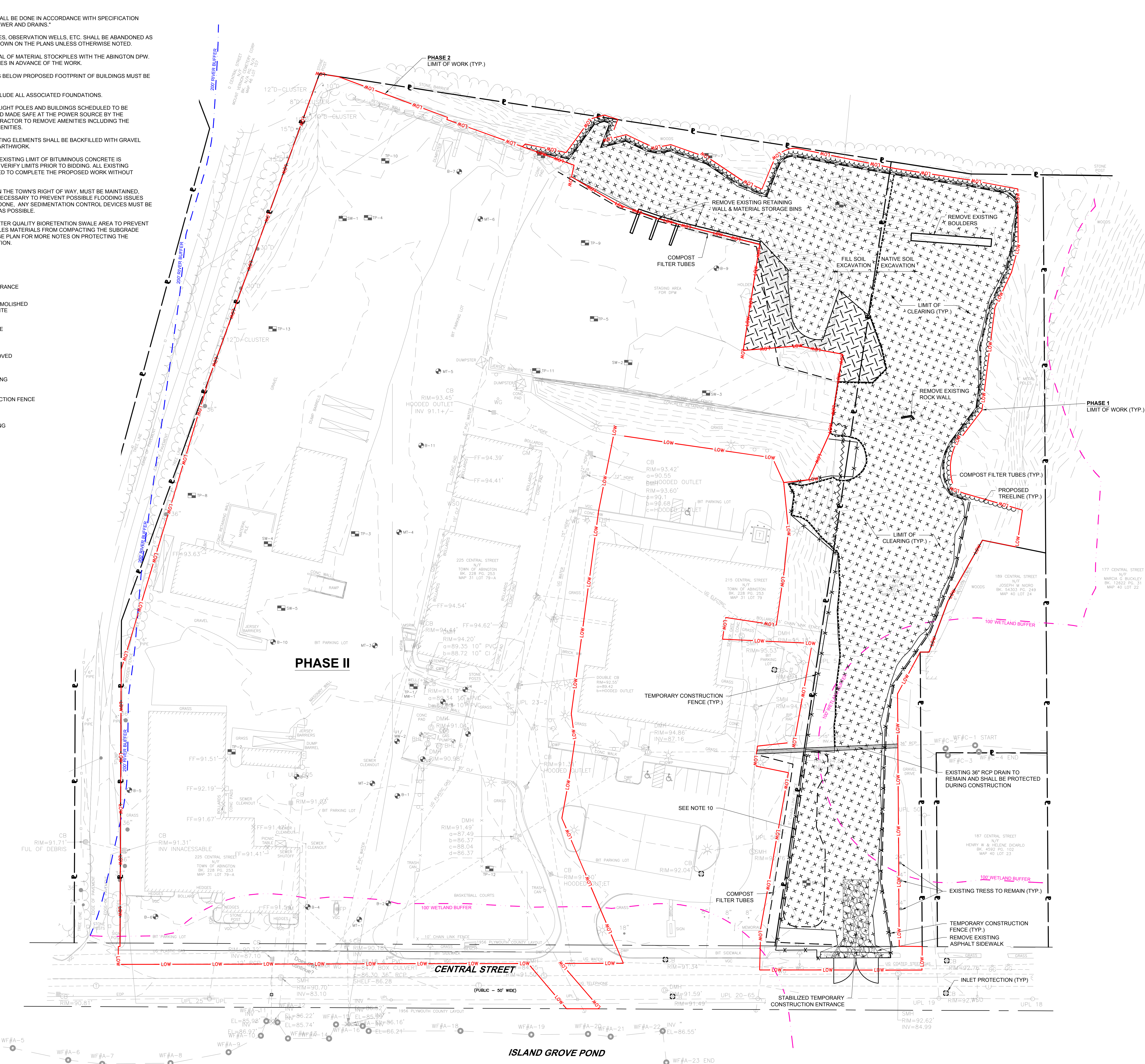
DRAWING NO.:
C101

SITE NOTES

- ALL EXISTING PIPES TO BE ABANDONED SHALL BE DONE IN ACCORDANCE WITH SPECIFICATION SECTION 02 41 13.29 "ABANDONMENT OF SEWER AND DRAINS."
- ALL EXISTING UTILITIES, PIPES, STRUCTURES, OBSERVATION WELLS, ETC. SHALL BE ABANDONED AS REQUIRED TO COMPLETE THE WORK AS SHOWN ON THE PLANS UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL COORDINATE REMOVAL OF MATERIAL STOCKPILES WITH THE ABINGTON DPW. TOWN SHALL REMOVE MATERIAL STOCKPILES IN ADVANCE OF THE WORK.
- ALL UTILITIES AND DRAINAGE STRUCTURES BELOW PROPOSED FOOTPRINT OF BUILDINGS MUST BE REMOVED IN THEIR ENTIRETY.
- REMOVAL OF CONCRETE WALLS SHALL INCLUDE ALL ASSOCIATED FOUNDATIONS.
- UTILITIES FOR SITE AMENITIES INCLUDING LIGHT POLES AND BUILDINGS SCHEDULED TO BE DEMOLISHED SHALL BE DISCONNECTED AND MADE SAFE AT THE POWER SOURCE BY THE ELECTRICAL FILED SUB-BIDDER. SITE CONTRACTOR TO REMOVE AMENITIES INCLUDING THE DISCONNECTED UTILITIES FEEDING THE AMENITIES.
- ALL VOIDS CREATED BY REMOVAL OF EXISTING ELEMENTS SHALL BE BACKFILLED WITH GRAVEL BORROW IN ACCORDANCE WITH 31 00 00 EARTHWORK.
- CONTRACTOR SHALL BE AWARE THAT THE EXISTING LIMIT OF BITUMINOUS CONCRETE IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY LIMITS PRIOR TO BIDDING. ALL EXISTING BITUMINOUS CONCRETE SHALL BE REMOVED TO COMPLETE THE PROPOSED WORK WITHOUT ADJUSTMENT TO COMPENSATION.
- SEDIMENTATION CONTROL DEVICES WITHIN THE TOWN'S RIGHT OF WAY, MUST BE MAINTAINED, INSPECTED, CLEANED AND REPLACED AS NECESSARY TO PREVENT POSSIBLE FLOODING ISSUES DURING RAIN EVENTS. ONCE ALL WORK IS DONE, ANY SEDIMENTATION CONTROL DEVICES MUST BE REMOVED BY THE CONTRACTOR AS SOON AS POSSIBLE.
- CONTRACTOR SHALL CORDON OFF THE WATER QUALITY BIORETENTION SWALE AREA TO PREVENT CONSTRUCTION EQUIPMENT AND STOCKPILES MATERIALS FROM COMPACTING THE SUBGRADE SOILS. SEE PLAN C401 GRADING & DRAINAGE PLAN FOR MORE NOTES ON PROTECTING THE STORMWATER SWALE DURING CONSTRUCTION.

SITE PREPARATION LEGEND

- STABILIZED CONST ENTRANCE
- STRUCTURES TO BE DEMOLISHED AND REMOVED FROM SITE
- GRAVEL SURFACE TO BE REMOVED
- PAVEMENT TO BE REMOVED
- LIMITS OF TREE CLEARING
- TEMPORARY CONSTRUCTION FENCE
- SILT FENCE
- COMPOST FILTER TUBING
- LIMIT OF WORK
- TREE REMOVAL
- INLET PROTECTION



KAESTLE BOOS
associates, inc

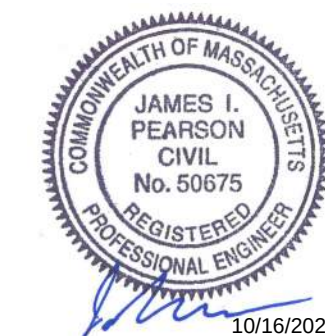
416 Slater Road, New Britain, CT 06053
Phone: 860-229-0361 A Fax: 860-229-5303
Additional offices located in Massachusetts and Rhode Island
Email: kba@kba-architects.com A Web: www.kba-architects.com

Consultants:
Weston & Sampson
Weston & Sampson Engineers, Inc.
100 Foxborough Boulevard, Suite 250
Foxborough, MA 02035
978.532.1900 800.SAMPSON
www.westonandsampson.com

Consulting Engineering Services, LLC
128 Carnegie Row, Ste. 104
Norwood MA 02062
617.281.7161
ceseng.com
CES #2021530.00

ISSUE DATE
DATE DESCRIPTION
10/16/2024 BIDDING

REVISIONS
DATE DESCRIPTION



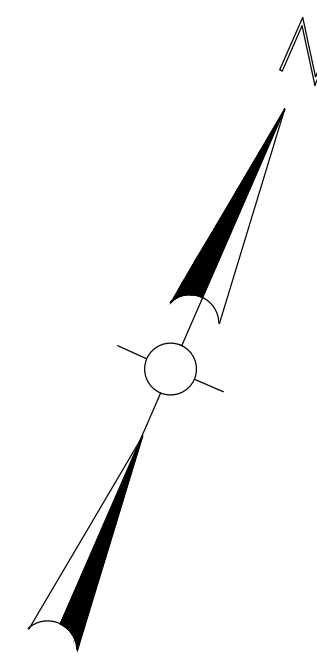
PHASE I - SALT SHED, FUEL ISLAND AND ASSOCIATED SITE WORK
225 CENTRAL STREET
ABINGTON, MA, 02351

PROJECT NO.: ENGG2-0465 DRAWN BY: CTP

SITE PREPARATION AND EROSION CONTROL DEMOLITION PLAN

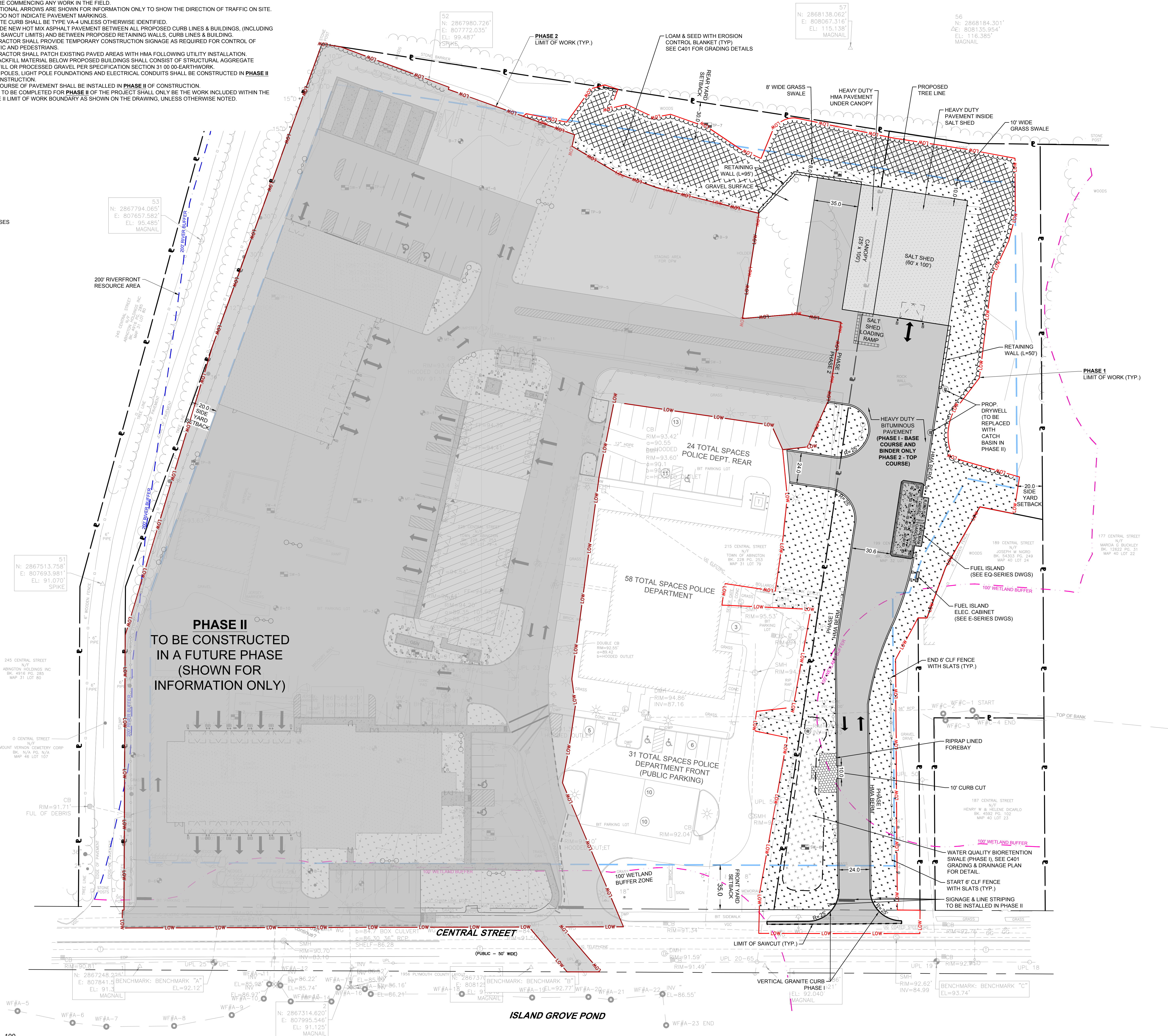
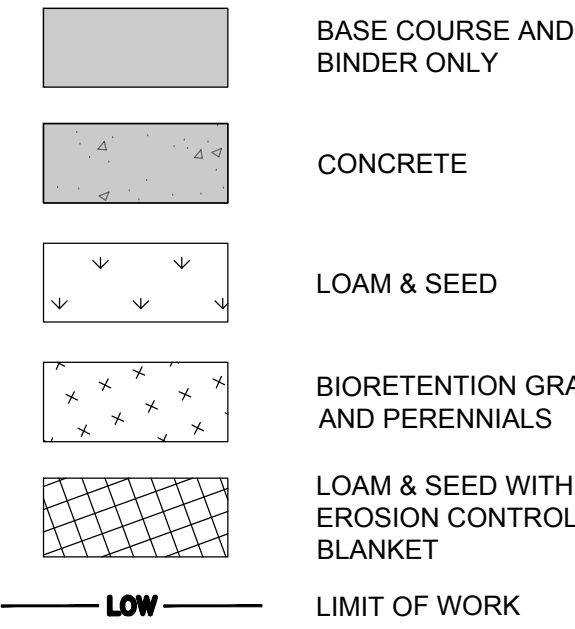
DRAWING NO.:
C201

0 30 60 100
SCALE: 1" = 30'



- NOTE:
1. THE CONTRACTOR SHALL GIVE TWENTY-FOUR (24) HOUR NOTICE TO PERTINENT TOWN DEPARTMENTS BEFORE COMMENCING ANY WORK IN THE FIELD.
 2. DIRECTIONAL ARROWS ARE SHOWN FOR INFORMATION ONLY TO SHOW THE DIRECTION OF TRAFFIC ON SITE. THEY DO NOT INDICATE PAVEMENT MARKINGS.
 3. GRANITE CURB SHALL BE TYPE VA-4 UNLESS OTHERWISE IDENTIFIED.
 4. PROVIDE NEW HOT MIX ASPHALT PAVEMENT BETWEEN ALL PROPOSED CURB LINES & BUILDINGS, (INCLUDING UP TO SAWCUT LIMITS) AND BETWEEN PROPOSED RETAINING WALLS, CURB LINES & BUILDING.
 5. CONTRACTOR SHALL PROVIDE TEMPORARY CONSTRUCTION SIGNAGE AS REQUIRED FOR CONTROL OF TRAFFIC AND PEDESTRIANS.
 6. CONTRACTOR SHALL PATCH EXISTING PAVED AREAS WITH HMA FOLLOWING UTILITY INSTALLATION.
 7. ALL BACKFILL MATERIAL BELOW PROPOSED BUILDINGS SHALL CONSIST OF STRUCTURAL AGGREGATE BACKFILL OR PROCESSED GRAVEL PER SPECIFICATION SECTION 31 00 00 EARTHWORK.
 8. LIGHT POLES, LIGHT POLE FOUNDATIONS AND ELECTRICAL CONDUITS SHALL BE CONSTRUCTED IN PHASE II OF CONSTRUCTION.
 9. TOP COURSE OF PAVEMENT SHALL BE INSTALLED IN PHASE II OF CONSTRUCTION.
 10. WORK TO BE COMPLETED FOR PHASE II OF THE PROJECT SHALL ONLY BE THE WORK INCLUDED WITHIN THE PHASE II LIMIT OF WORK BOUNDARY AS SHOWN ON THE DRAWING, UNLESS OTHERWISE NOTED.

LEGEND



KAESTLE BOOS
associates, inc

416 Slater Road, New Britain, CT 06053
Phone: 860-229-0361 A Fax: 860-229-5303
Additional offices located in Massachusetts and Rhode Island
Email: kba@kba-architects.com A Web: www.kba-architects.com

Consultants:
Weston & Sampson
Weston & Sampson Engineers, Inc.
100 Foxborough Boulevard, Suite 250
Foxborough, MA 02035
978.532.1900 800.SAMPSON
www.westonandsampson.com

Consulting Engineering Services, LLC
128 Carnegie Row, Ste. 104
Norwood MA 02062
617.261.7161
ceseng.com
CES #2021530.00

ISSUE DATE
DATE DESCRIPTION
10/16/2024 BIDDING

REVISIONS
DATE DESCRIPTION



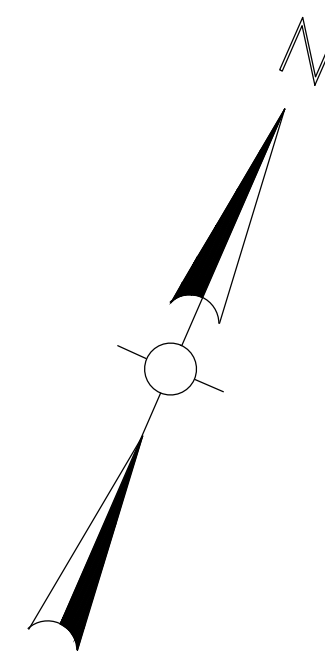
PHASE I - SALT SHED, FUEL ISLAND AND ASSOCIATED SITE WORK
225 CENTRAL STREET
ABINGTON, MA, 02351

PROJECT NO.: ENGG2-0465 DRAWN BY: CTP

OVERALL SITE LAYOUT AND MATERIALS PLAN

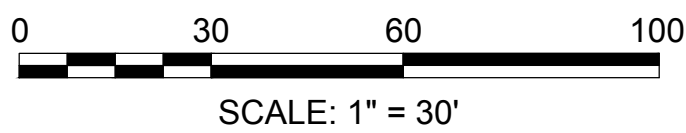
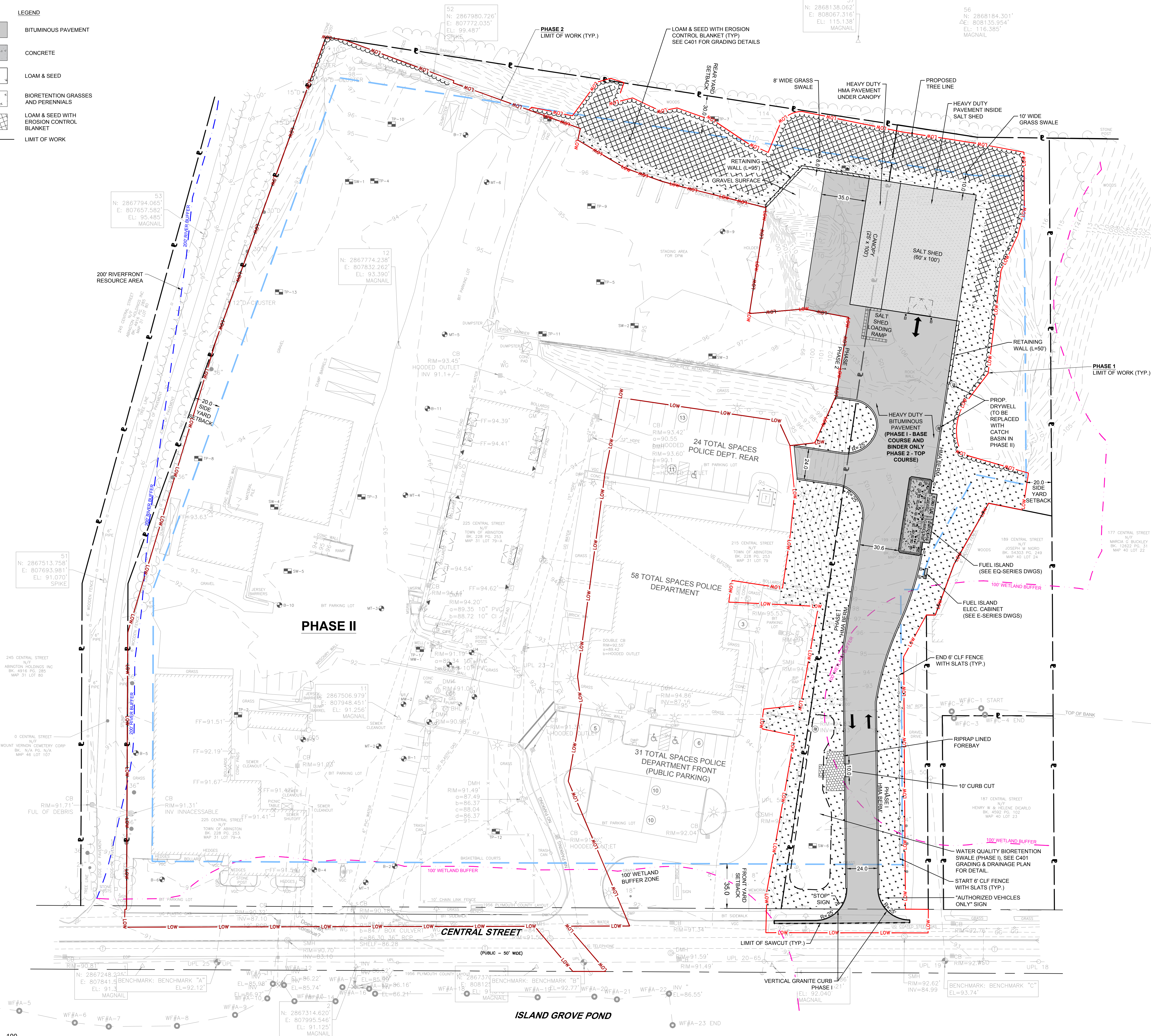
DRAWING NO.:
C301

2024 © COPYRIGHT KAESTLE BOOS ASSOC., INC.



NOTES:
1. REFER TO SHEET C301 FOR SITE LAYOUT & MATERIALS PLAN NOTES.

LEGEND	
	BITUMINOUS PAVEMENT
	CONCRETE
	LOAM & SEED
	BIORETENTION GRASSES AND PERENNIALS
	LOAM & SEED WITH EROSION CONTROL BLANKET
	LIMIT OF WORK



KAESTLE BOOS
associates, inc

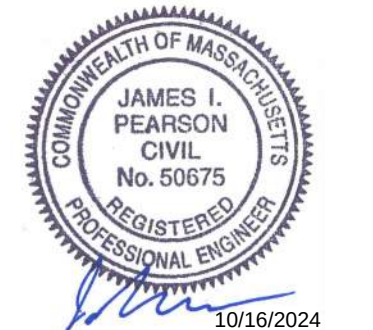
416 Slater Road, New Britain, CT 06053
Phone: 860-229-0361 A Fax: 860-229-5303
Additional offices located in Massachusetts and Rhode Island
Email: kba@kba-architects.com A Web: www.kba-architects.com

Consultants:
Weston & Sampson
Weston & Sampson Engineers, Inc.
100 Foxborough Boulevard, Suite 250
Foxborough, MA 02035
978.532.1900 800.SAMPSON
www.westonandsampson.com

CES Consulting Engineering Services, LLC
128 Carnegie Row, Ste. 104
Norwood MA 02062
617.281.7161
ceseng.com
CES #2021530.00

DATE	ISSUE DATE	DESCRIPTION
10/16/2024		BIDDING

DATE	REVISIONS	DESCRIPTION



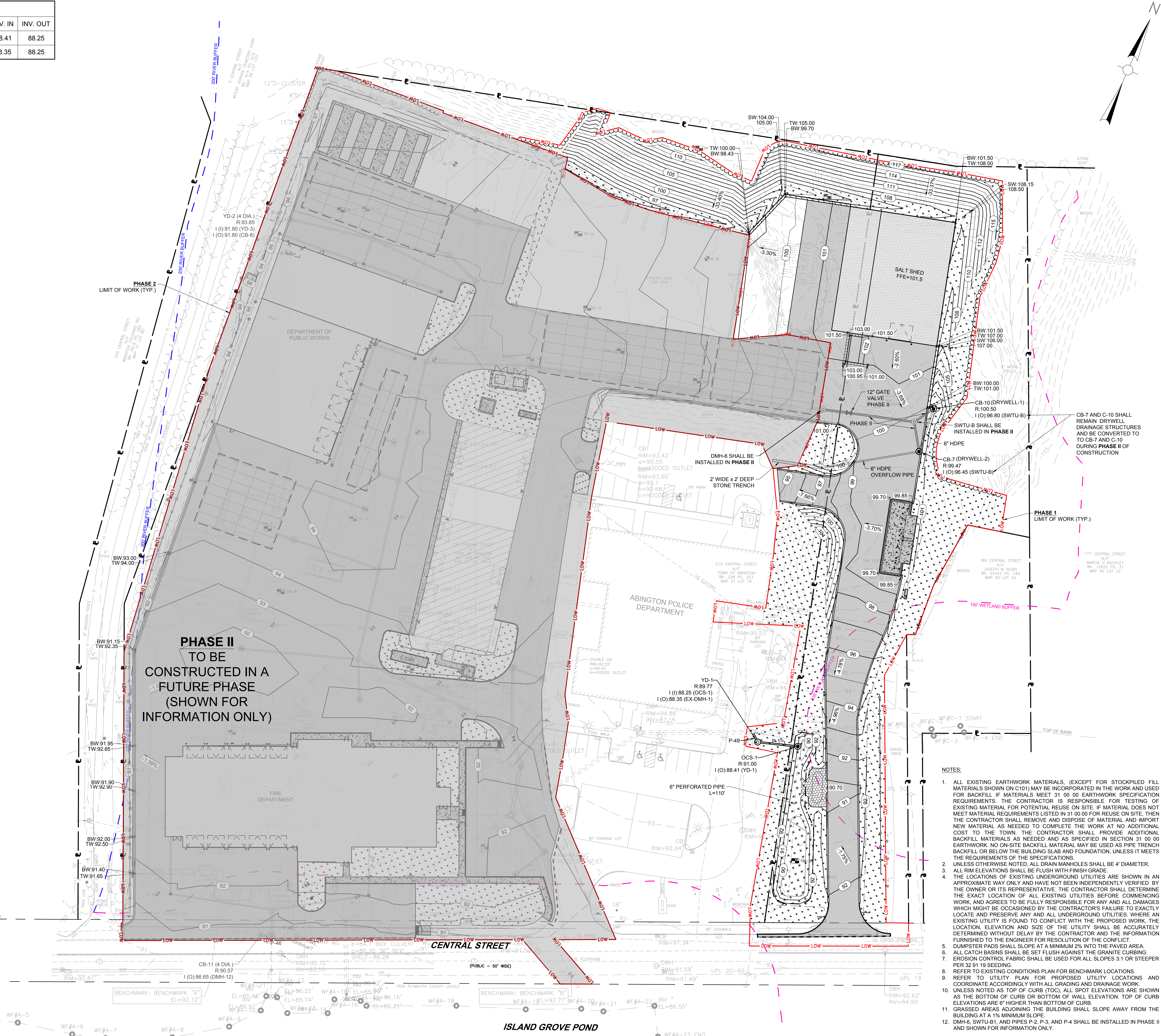
**PHASE I - SALT
SHED, FUEL ISLAND
AND ASSOCIATED
SITE WORK**
225 CENTRAL STREET
ABINGTON, MA, 02351

PROJECT NO.: ENGG2-0465 DRAWN BY: CTP

**SITE LAYOUT AND
MATERIALS PLAN
PHASE I**

DRAWING NO.:
C302

PIPE TABLE					
PIPE	SIZE & TYPE	LENGTH	SLOPE	INV. IN	INV. OUT
P-1	12" HDPE	28-LF	0.005	88.41	88.25
P-49	12" HDPE	6-LF	0.013	88.35	88.25



KAESTLE BOOS
associates, inc

416 Slater Road, New Britain, CT 06053
Phone: 860-229-0361 ▲ Fax: 860-229-5303
Additional offices located in Massachusetts and Rhode Island
Email: kba@kba-architects.com ▲ Web: www.kba-architects.com

sultants:

Weston & Sampson[™]

Weston & Sampson Engineers, Inc.
100 Foxborough Boulevard, Suite 250
Foxborough, MA 02035
978.532.1900 800.SAMPSON

www.westonandsampson.com



**Consulting Engineering
Services, LLC**
128 Carnegie Row, Ste. 104
Norwood MA 02062
617.261.7161
ceseng.com
CES #2021530.00

ISSUE DATE	
DATE	DESCRIPTION
4/16/2024	BIDDING

REVISIONS	
DATE	DESCRIPTION



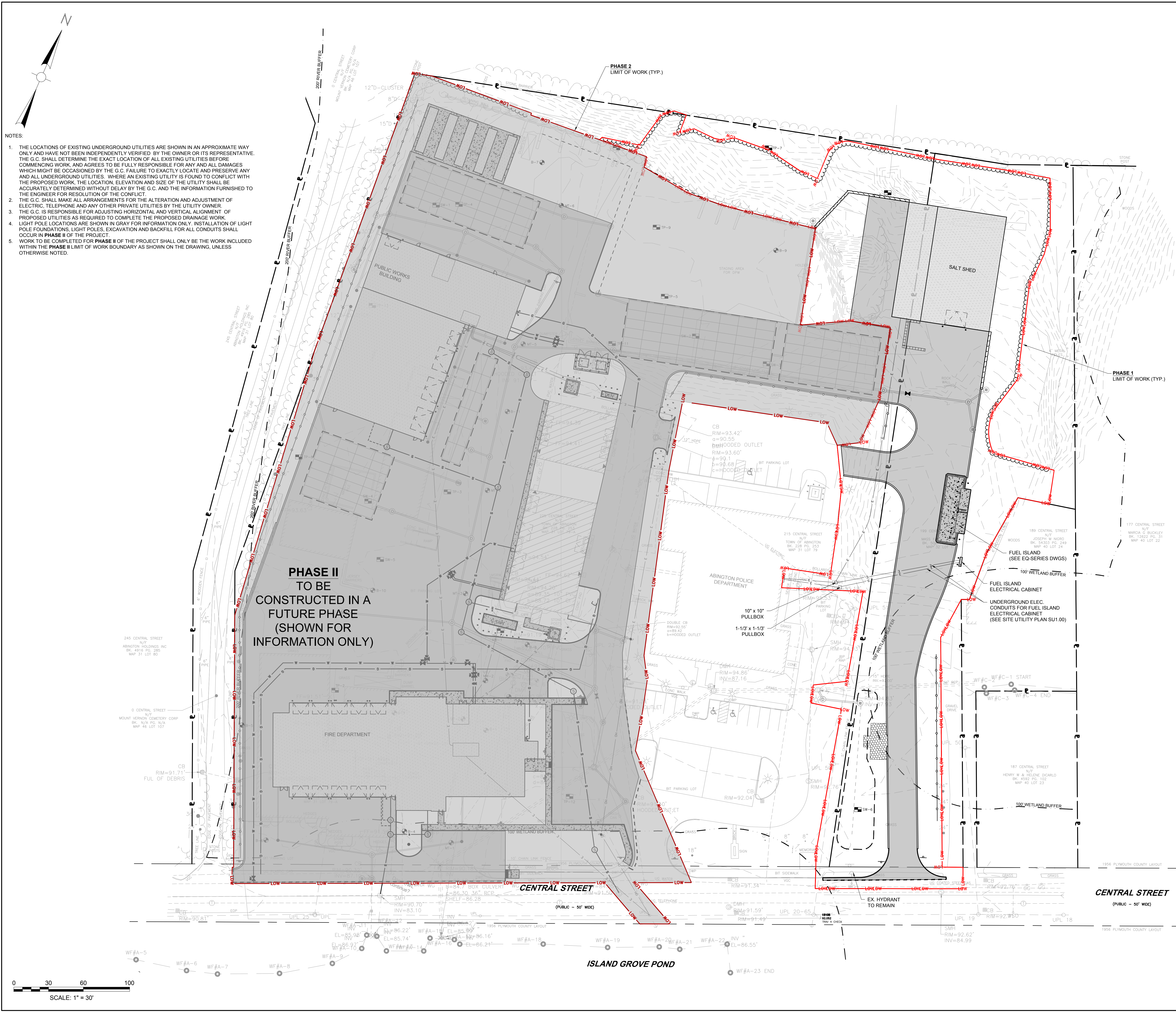
**PHASE I - SALT
SHED, FUEL ISLAND
AND ASSOCIATED
SITE WORK**

**225 CENTRAL STREET
ABINGTON, MA, 02351**

PROJECT NO.: ENG22-0465 DRAWN BY: CTP

GRADING AND DRAINAGE PLAN

DRAWING NO.:
C401



- NOTES:
1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE G.C. SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE G.C. FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE G.C. AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
 2. THE G.C. SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY OWNER.
 3. THE G.C. IS RESPONSIBLE FOR ADJUSTING HORIZONTAL AND VERTICAL ALIGNMENT OF PROPOSED UTILITIES AS REQUIRED TO COMPLETE THE PROPOSED DRAINAGE WORK.
 4. LIGHT POLE LOCATIONS ARE SHOWN IN GRAY FOR INFORMATION ONLY. INSTALLATION OF LIGHT POLE FOUNDATIONS, LIGHT POLES, EXCAVATION AND BACKFILL FOR ALL CONDUITS SHALL OCCUR IN PHASE II OF THE PROJECT.
 5. WORK TO BE COMPLETED FOR PHASE II OF THE PROJECT SHALL ONLY BE THE WORK INCLUDED WITHIN THE PHASE II LIMIT OF WORK BOUNDARY AS SHOWN ON THE DRAWING, UNLESS OTHERWISE NOTED.

KAESTLE BOOS
associates, inc

416 Slater Road, New Britain, CT 06053
Phone: 860-229-0361 ▲ Fax: 860-229-5303
Additional offices located in Massachusetts and Rhode Island
Email: kba@kba-architects.com ▲ Web: www.kba-architects.com

Consultants:
Weston & Sampson
Weston & Sampson Engineers, Inc.
100 Foxborough Boulevard, Suite 250
Foxborough, MA 02035
978.532.1900 800.SAMPSON
www.westonandsampson.com

CES Consulting Engineering Services, LLC
128 Carnegie Row, Ste. 104
Norwood MA 02062
617.281.7161
ceseng.com
CES #2021530.00

ISSUE DATE
DATE 10/16/2024
DESCRIPTION BIDDING

REVISIONS
DATE
DESCRIPTION



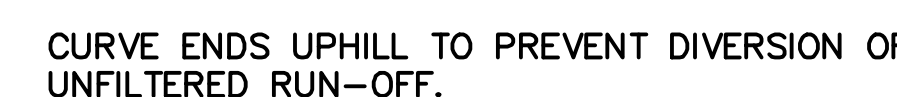
PHASE I - SALT SHED, FUEL ISLAND AND ASSOCIATED SITE WORK
225 CENTRAL STREET
ABINGTON, MA, 02351

PROJECT NO.: ENG22-0465 DRAWN BY: CTP

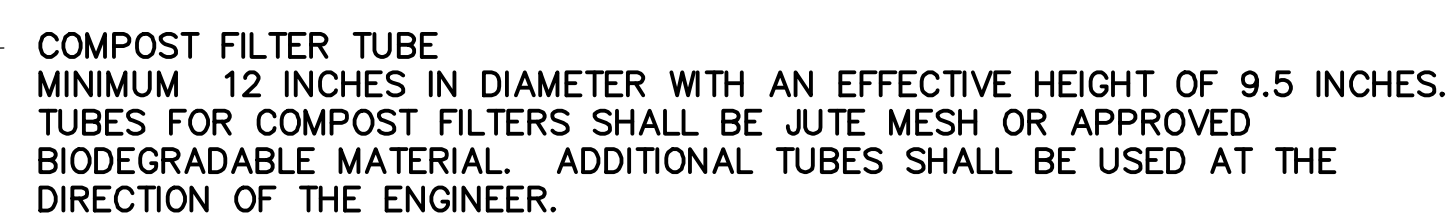
UTILITY PLAN

DRAWING NO.:
C501

2024 © COPYRIGHT KAESTLE BOOS ASSOC., INC.



1. PROVIDE A MINIMUM TUBE DIAMETER OF 12 INCHES FOR SLOPES UP TO 50 FEET IN LENGTH WITH A SLOPE RATIO OF 3H:1V OR STEEPER. LONGER SLOPES OF 3H:1V MAY REQUIRE LARGER TUBE DIAMETER OR ADDITIONAL CURSING OF FILTER TUBES TO CREATE A FILTER BERM. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR SITUATIONS WITH LONGER OR STEEPER SLOPES.
2. INSTALL TUBES ALONG CONTOURS AND PERPENDICULAR TO SHEET OR CONCENTRATED FLOW.
3. DO NOT INSTALL IN PERENNIAL, EPHEMERAL OR INTERMITTENT STREAMS.
4. CONFIGURE TUBES AROUND EXISTING SITE FEATURES TO MINIMIZE SITE DISTURBANCE AND MAXIMIZE CAPTURE AREA OF STORMWATER RUN-OFF.
5. MULCH MATERIAL FOR THE FILTER TUBES SHALL BE WEED-FREE STRAW, WOOD CHIPS, BARK, OR WOOD CHIPS. OR COIR. STRAW SHALL BE WEED FREE AND DERIVED FROM THRESHING OF GRAIN CROP.

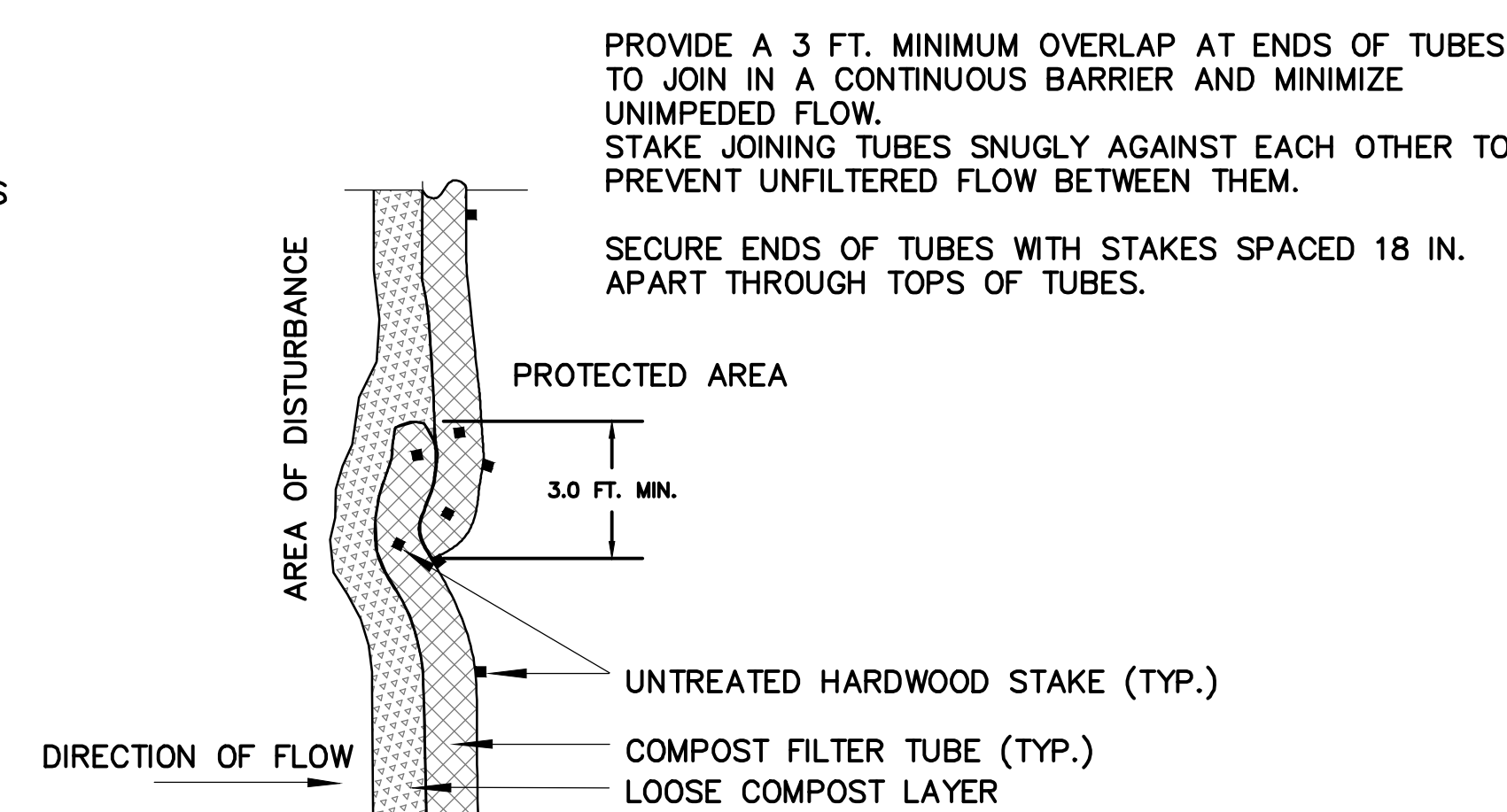


TAMP TUBES IN PLACE TO ENSURE GOOD CONTACT WITH SOIL SURFACE. IT IS NOT NECESSARY TO TRENCH TUBES INTO EXISTING GRADE.

CH X 2 INCH X 3 FEET
EATED HARDWOOD STAKES, UP TO 4 FT. APART OR AS REQUIRED TO SECURE
S IN PLACE.

WHEN STAKING IS NOT POSSIBLE, SUCH AS WHEN TUBES MUST BE PLACED ON PAVEMENT, HEAVY CONCRETE OR CINDER BLOCKS CAN BE USED BEHIND TUBES UP TO 4 FT. APART OR AS REQUIRED TO SECURE TUBES IN PLACE.

UNDISTURBED SUBGRADE



PLAN VIEW – JOINING DETAIL

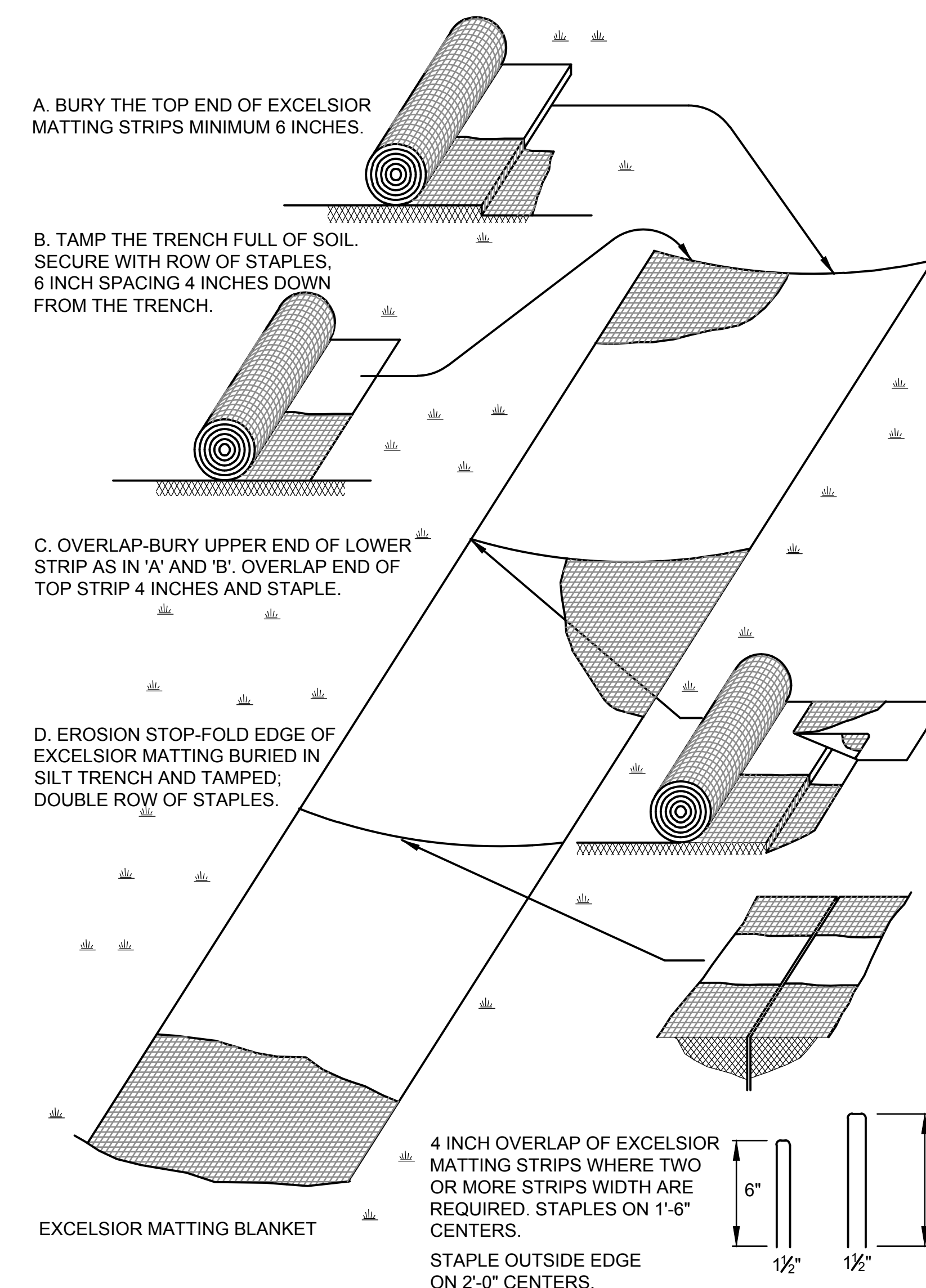
SCALE: N.T.S.



1. AT LEAST ONE CONSTRUCTION ENTRANCE SHALL BE PLACED AT EACH ENTRANCE TO THE SITE, THROUGHOUT CONSTRUCTION ACTIVITIES.
2. THE LOCATION OF THE CONSTRUCTION ENTRANCE(S) SHALL BE APPROVED BY THE OWNER PRIOR TO PLACEMENT.
3. CONSTRUCTION ENTRANCE(S) SHALL CONSIST OF 2" CRUSHED STONE PLACED AT A DEPTH OF A MINIMUM 8 INCHES PLACED OVER GEOTEXTILE FABRIC.
4. CONTRACTOR IS RESPONSIBLE FOR DAILY INSPECTION AND ALL NECESSARY MAINTENANCE OF ALL ENTRANCES.
5. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF SEDIMENTS OR ANY OTHER MATERIALS TRACKED ONTO THE STREET, AS WELL MAINTENANCE OF EROSION CONTROL MEASURES.

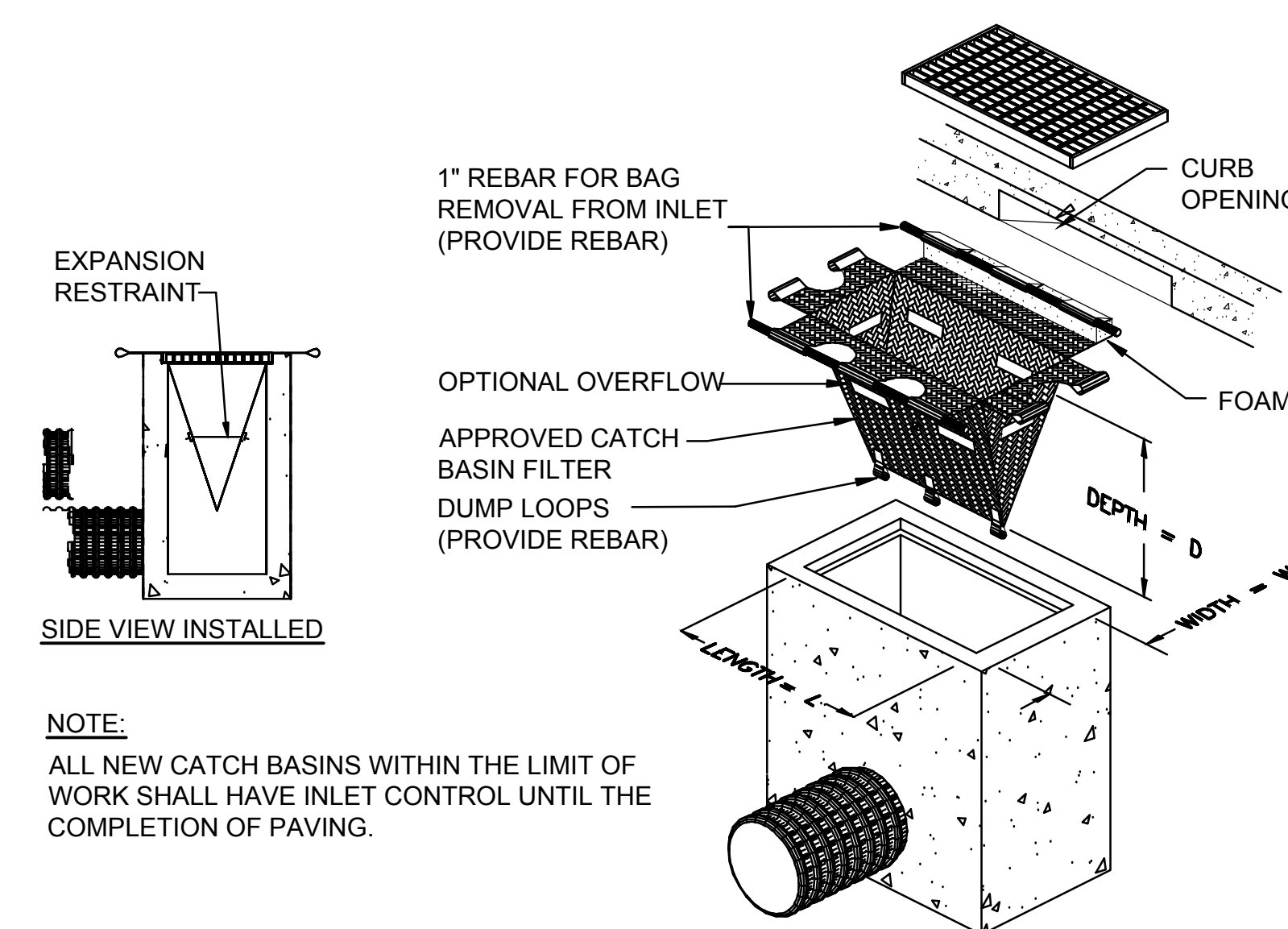


1. EROSION CONTROL MEASURES SHALL BE INCORPORATED IN THE SEQUENCE OF CONSTRUCTION TO PREVENT SEDIMENT LADEN WATER FROM LEAVING THE SITE.
2. AREAS SUBJECT TO EROSION SHALL BE MINIMIZED IN TERMS OF TIME AND AREA.
3. IN GENERAL, WORK REQUIRING EROSION CONTROL INCLUDES EXCAVATIONS, FILLS, DRAINAGE, SWALES AND DITCHES, ROUGH AND FINISH GRADING, AND STOCKPIILING OF EARTH.
4. DO NOT DISTURB VEGETATION AND TOPSOIL BEYOND THE PROPOSED LIMIT OF SILT FENCE ACTIVITIES.
5. TEMPORARY SILT CONTROLS SHALL BE PLACED AS SHOWN ON THE PLAN. PERMANENTLY STABILIZE EACH COMPLETED SEGMENT OF CONSTRUCTION.
6. THE CONTRACTOR SHALL REMOVE TEMPORARY SILT CONTROLS AND ALL ACCUMULATED SILT AND DEBRIS AFTER COMPLETION OF CONSTRUCTION OPERATIONS.
7. SILT CONTROLS SHALL BE IN PLACE AT ALL TIMES DURING CONSTRUCTION.
8. THE CONTRACTOR SHALL REMOVE AND LEGALLY DISPOSE OF ALL SILT AND DEBRIS FROM EACH DRAINAGE STRUCTURE UPON COMPLETION OF THE PROJECT.
9. OBJECTS AND/OR AREAS DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION.
10. ALL DISTURBED AREAS SHALL BE RESTORED TO EXISTING GRADE. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE AS NEEDED.
11. SILT CONTROLS SHALL BE REMOVED UPON THE SATISFACTORY COMPLETION OF ALL WORK SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
12. SITE PERIMETER SHALL HAVE COMPOST FILTER TUBES INSTALLED AS SHOWN ON C201.



SCALE: N.T.S.

NOTE:
JUTE NETTING TO BE USED ON ALL SLOPES GREATER THAN 4H:1V
AS INDICATED ON GRADING PLANS



INLET 3
SCALE: N.T.S.

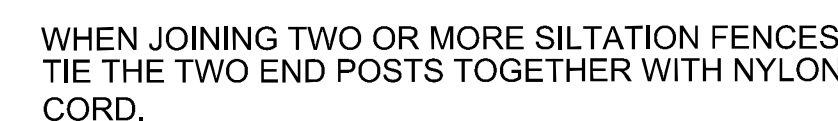
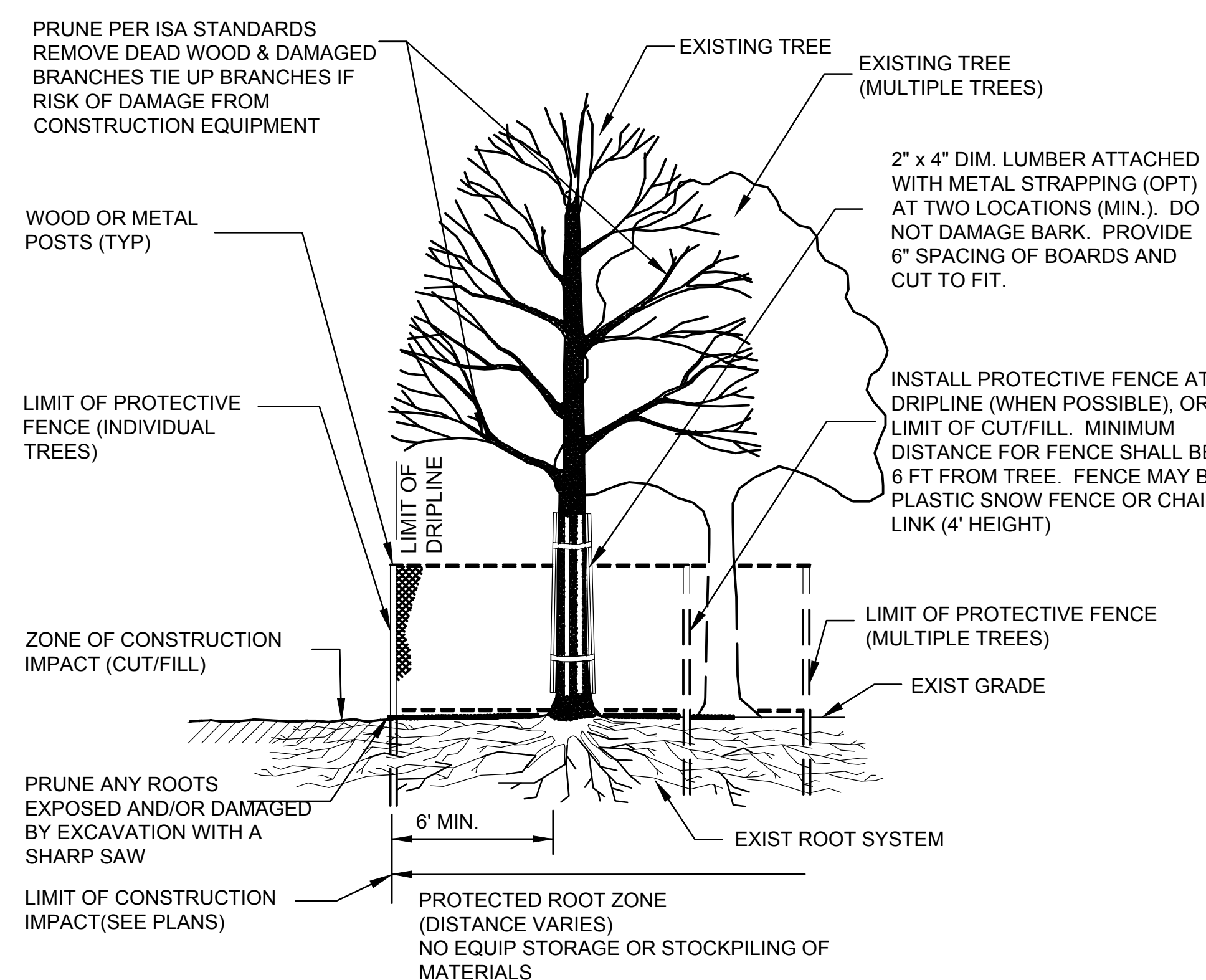


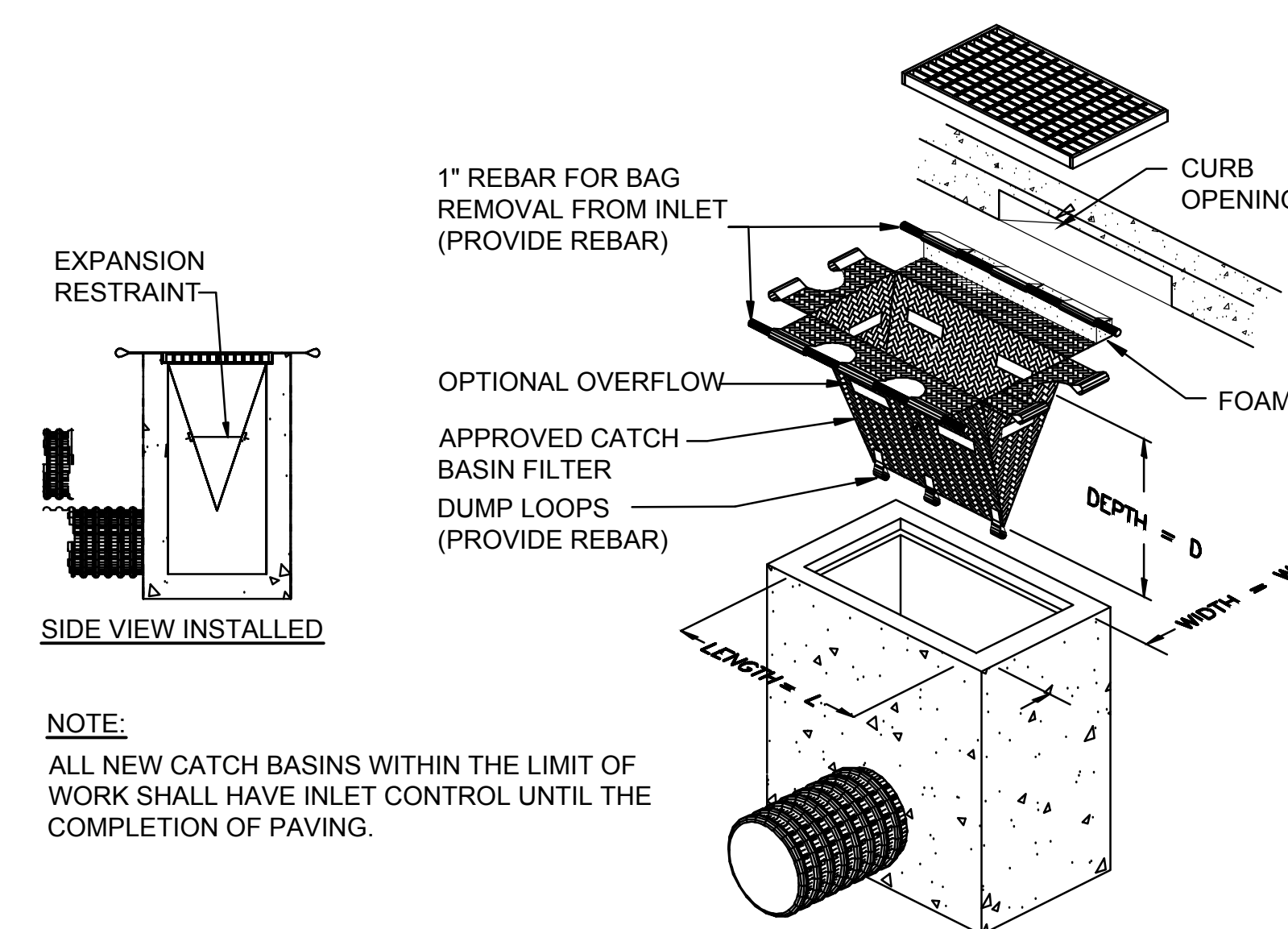
Diagram illustrating the installation of a Slope Check:

- 2 INCH x 2 INCH x 40 INCH WOOD POST
- EXISTING SOIL
- STANDARD FILTER FABRIC
- BACKFILL
- COMPOST FILTER TUBE (SEE DETAIL, THIS SHEET)
- FLOW
- 6 INCH x 6 INCH TRENCH
- STANDARD FILTER FABRIC EXTENDS INTO TRENCH

SCALE: N.T.S.



EXISTING
CONTENTS



INLET 3
SCALE: N.T.S.



**Consulting Engineering
Services, LLC**
128 Carnegie Row, Ste. 10
Norwood MA 02062
617.261.7161
ceseng.com
CES #2021530.00

REVISIONS	
DATE	DESCRIPTION



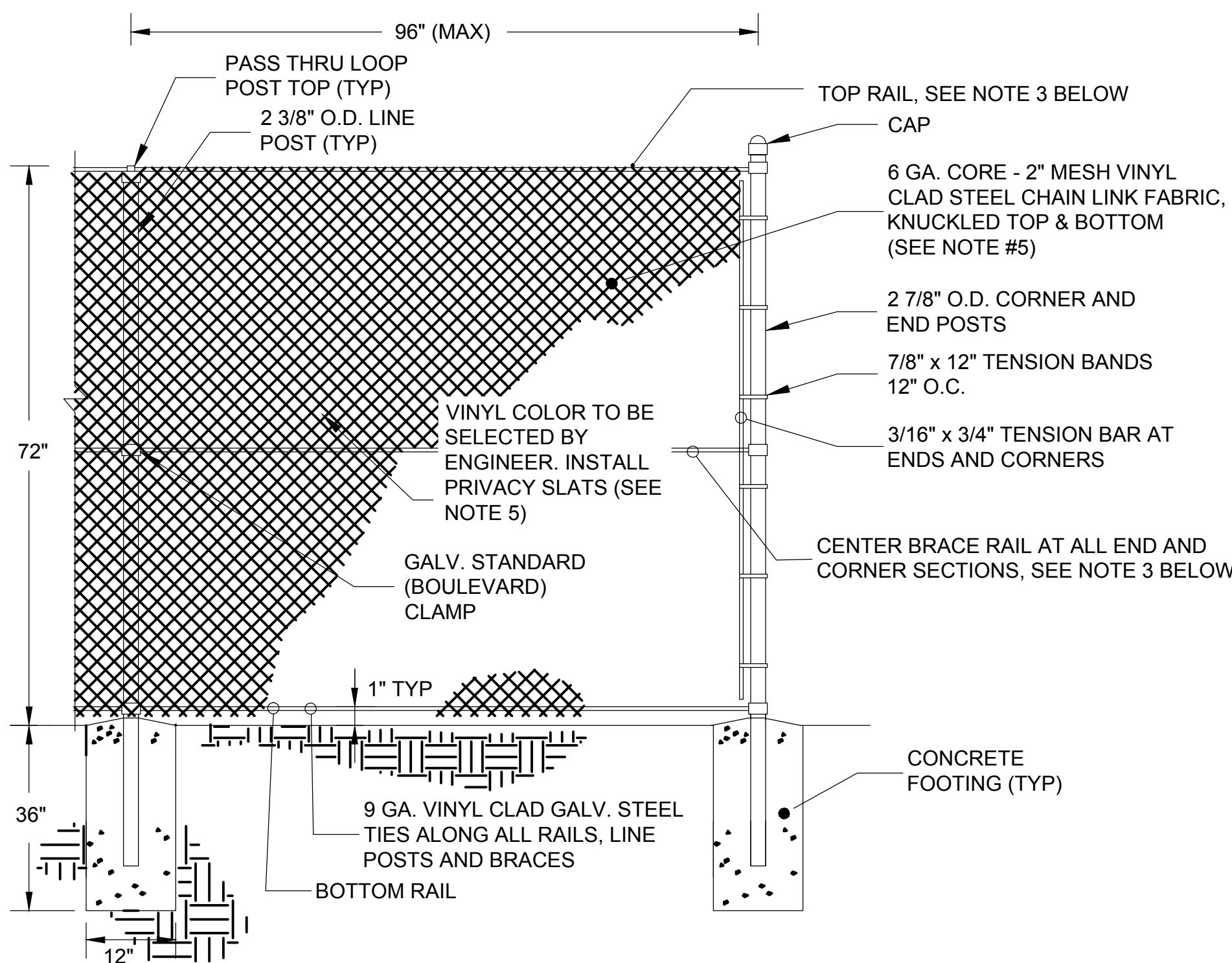
**225 CENTRAL STREET
ABINGTON, MA, 02351**

DRAWN BY: CTI

SITE DETAILS 1

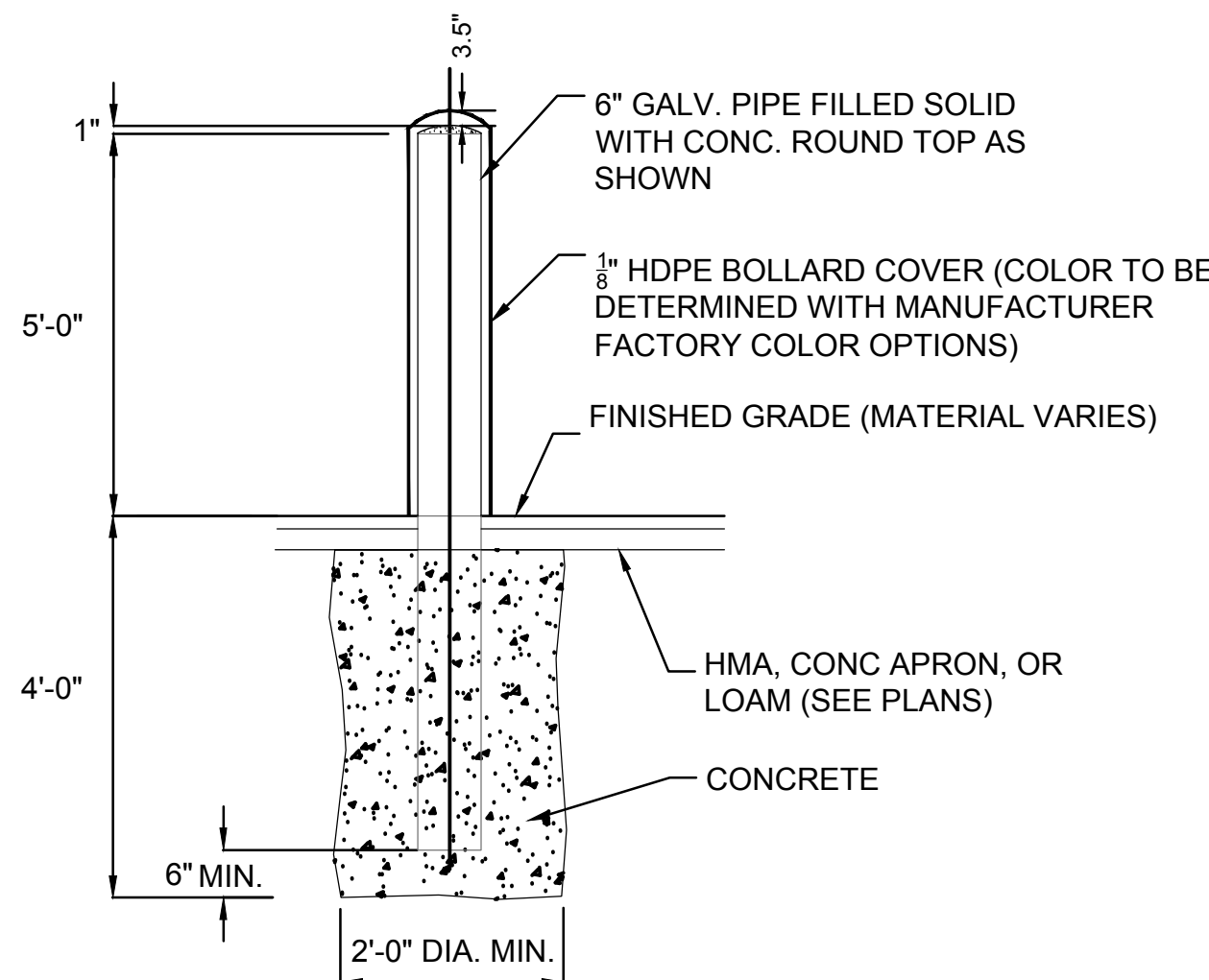
DRAWING NO. :

C601



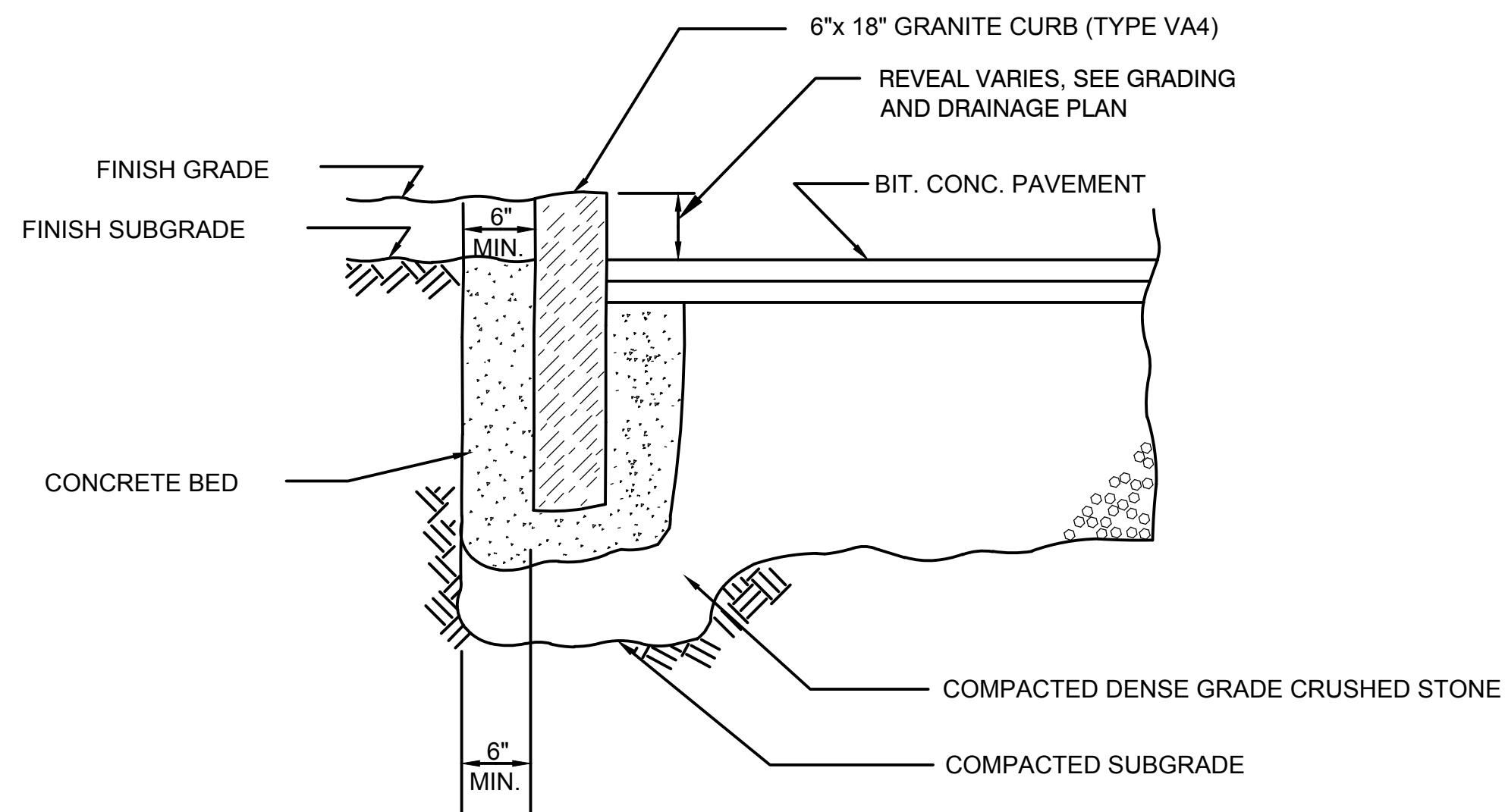
- NOTES:
1. ALL FENCE PIPE SHALL BE SCH. 40, VINYL CLAD HOT DIP GALV. STEEL PIPE.
 2. ALL LINE POSTS SHALL BE INSTALLED EQUALLY SPACED BETWEEN END & CORNER POSTS.
 3. ALL RAILS SHALL BE 1.68" O.D. PIPE.
 4. ALL CLAMPS, TIES, POST TOPS, BANDS, POSTS, ETC. SHALL BE VINYL CLAD TO MATCH FABRIC.
 5. PRIVACY SLATS SHALL BE INSTALLED ALONG THE ENTIRE FENCE FOR ADDITIONAL SCREENING. COLOR TO BE DETERMINED BY OWNER.

1 CHAIN LINK FENCE
SCALE: N.T.S.

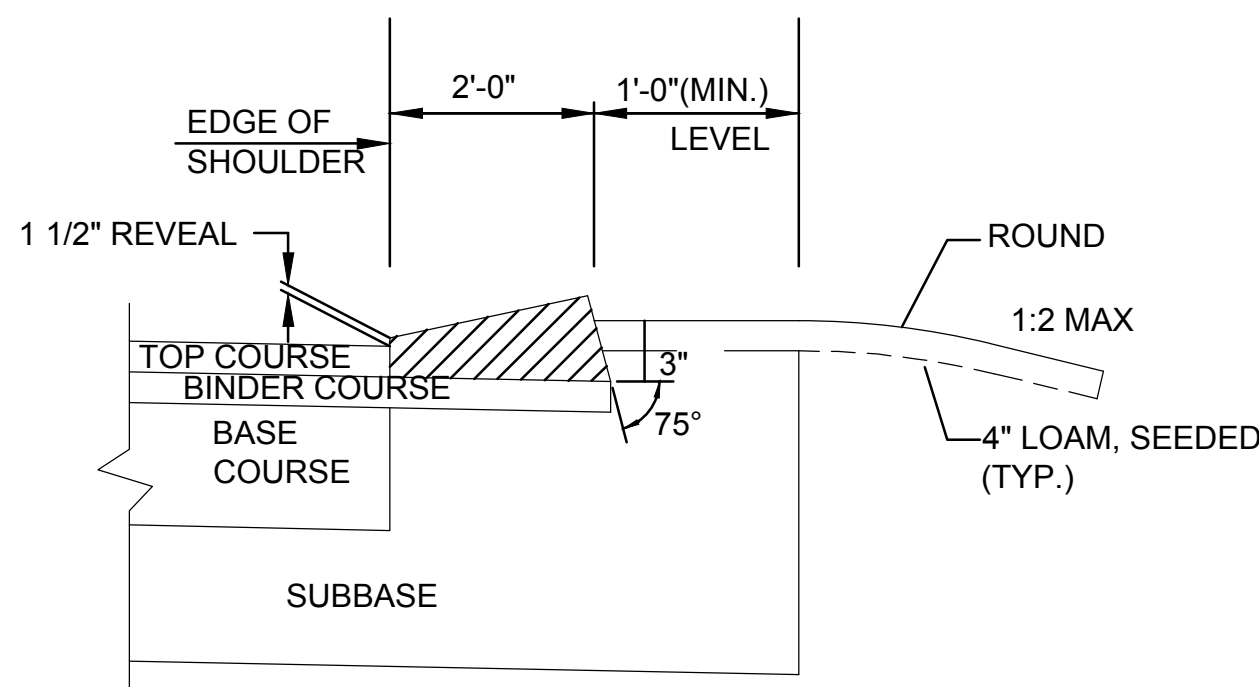


- NOTES:
1. SEE C103 SERIES FOR BOLLARD LOCATIONS.
 2. BOLLARD FOUNDATION CONCRETE TO BE 3000 PSI MIN.
 3. EXACT LOCATION TO BE DETERMINED IN THE FIELD AND APPROVED BY TOWN BEFORE INSTALLATION.
 4. 6" GALVANIZED PIPE PROVIDED BY MISC. METALS CONTRACTOR. INSTALLATION AND CONCRETE BY GENERAL CONTRACTOR.
 5. HDPE BOLLARD SLEEVE WITH 6 3/8" DIAMETER TO BE INSTALLED OVER STEEL BOLLARD USING TWO FOAM EXPANSION STRIPS.

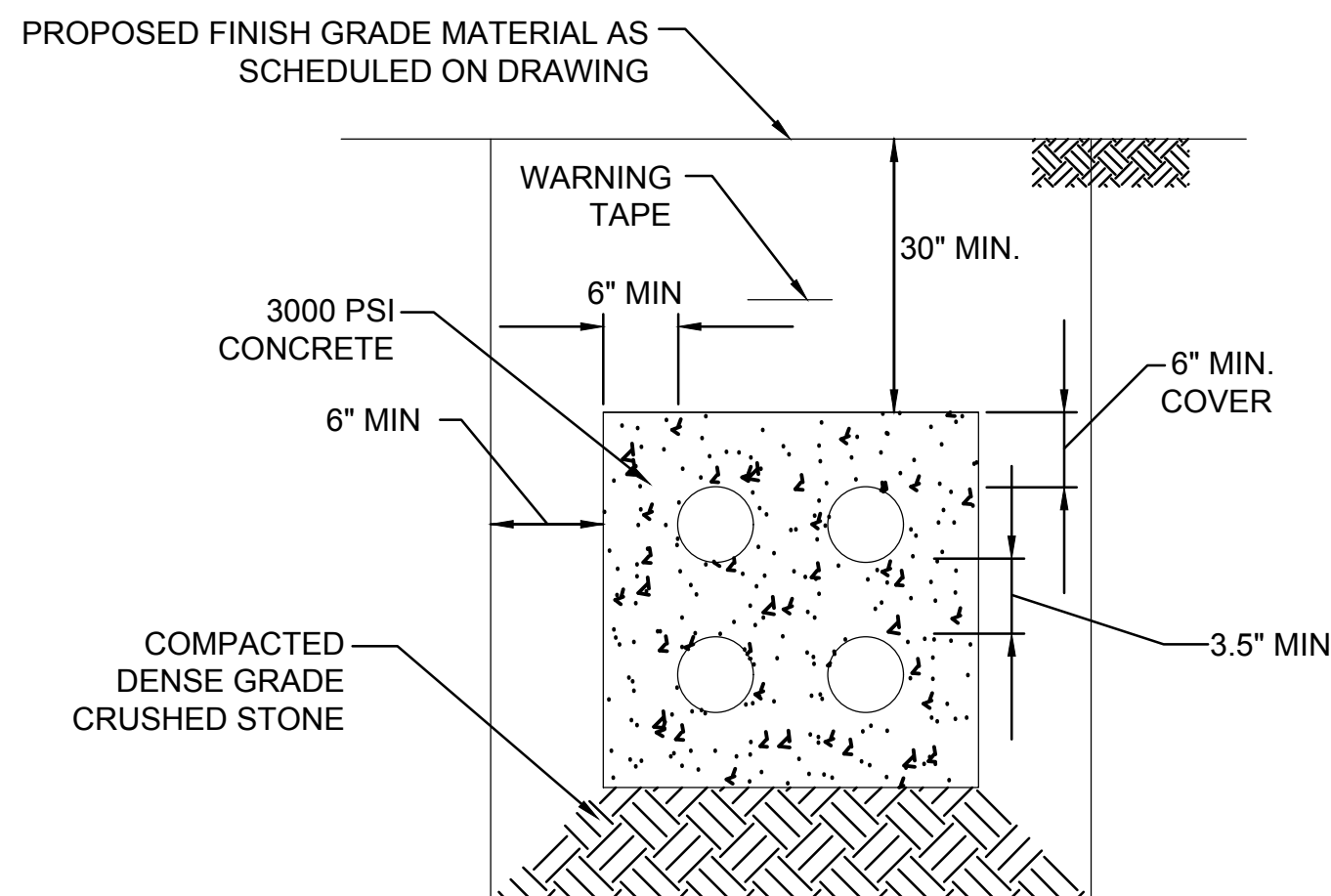
3 EXTERIOR STEEL PIPE BOLLARD
SCALE: N.T.S.



6 GRANITE CURB DETAIL
SCALE: N.T.S.

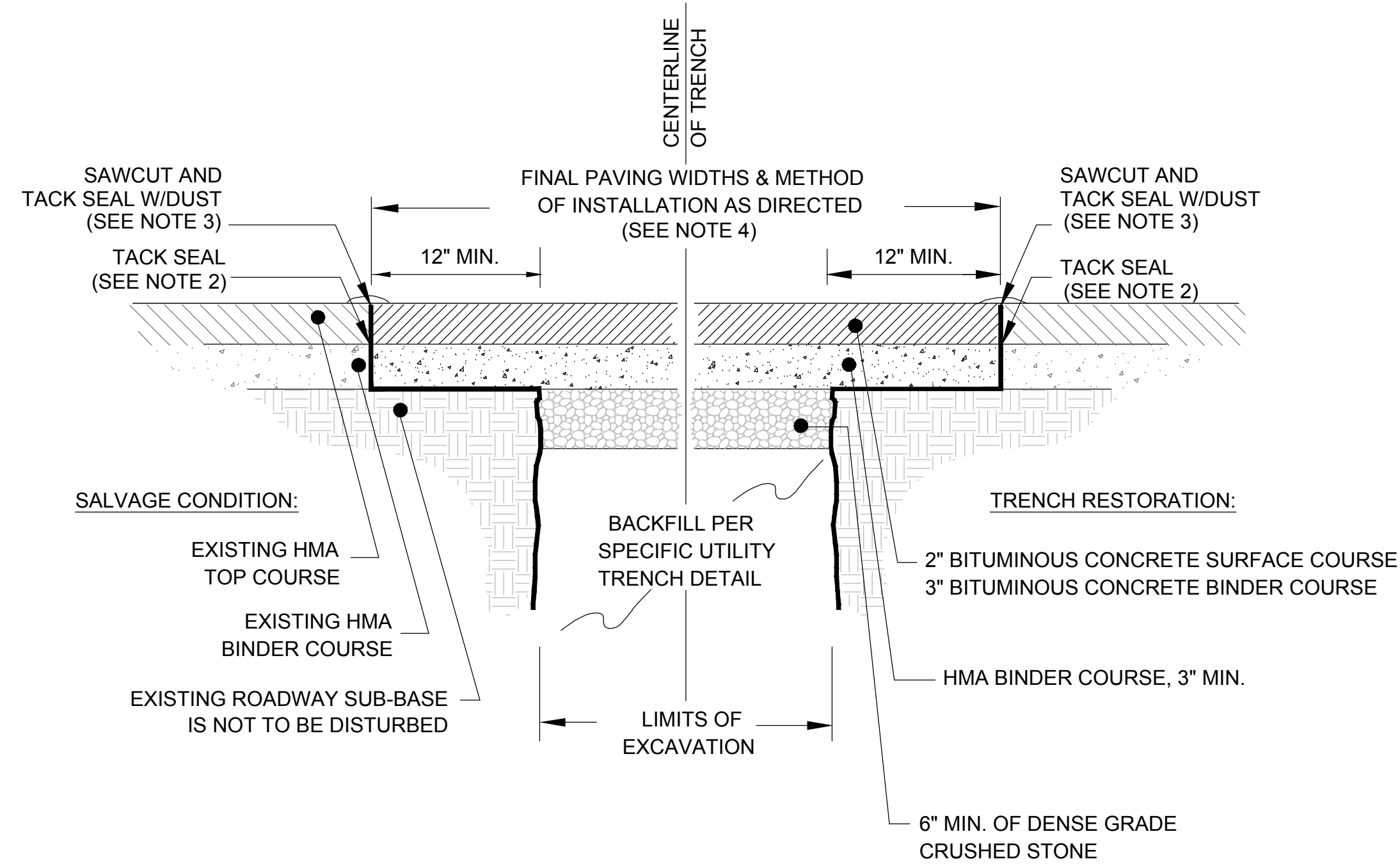


4 HMA BERM
SCALE: N.T.S.



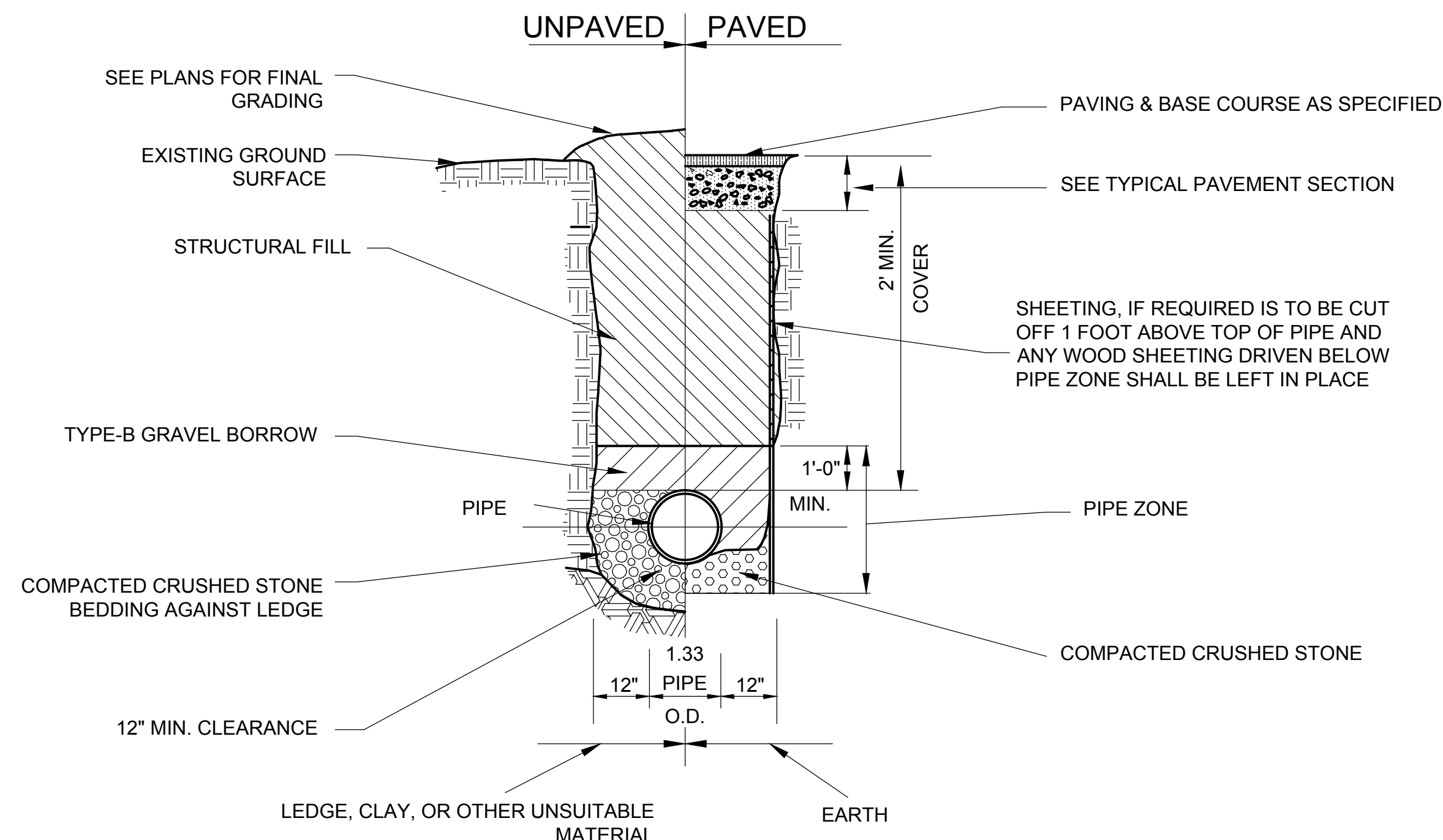
- NOTES:
1. G.C. IS RESPONSIBLE FOR EXCAVATION, CONCRETE ENCASEMENT, REINFORCEMENT AND BACKFILL. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING THE CONDUITS & SPACERS.
 2. PROVIDE REINFORCEMENT PER LOCAL UTILITY COMPANY REQUIREMENTS.
 3. QUANTITY & SIZE OF CONDUITS VARY. DUCTBANK SIZE SHALL BE ADJUSTED BASED ON CONDUIT TYPES & SIZES IDENTIFIED ON THE E-SERIES DRAWINGS.
 4. CONTRACTOR SHALL COORDINATE DEPTH OF PROPOSED DUCTBANK WITH PROPOSED UTILITY & DRAINAGE SYSTEMS TO AVOID CONFLICTS.
 5. BACKFILL AROUND DUCTBANK WITH GRAVEL BORROW BACKFILL MATERIAL.

7 ELECTRIC/COMMUNICATION DUCTBANK DETAIL
SCALE: N.T.S.

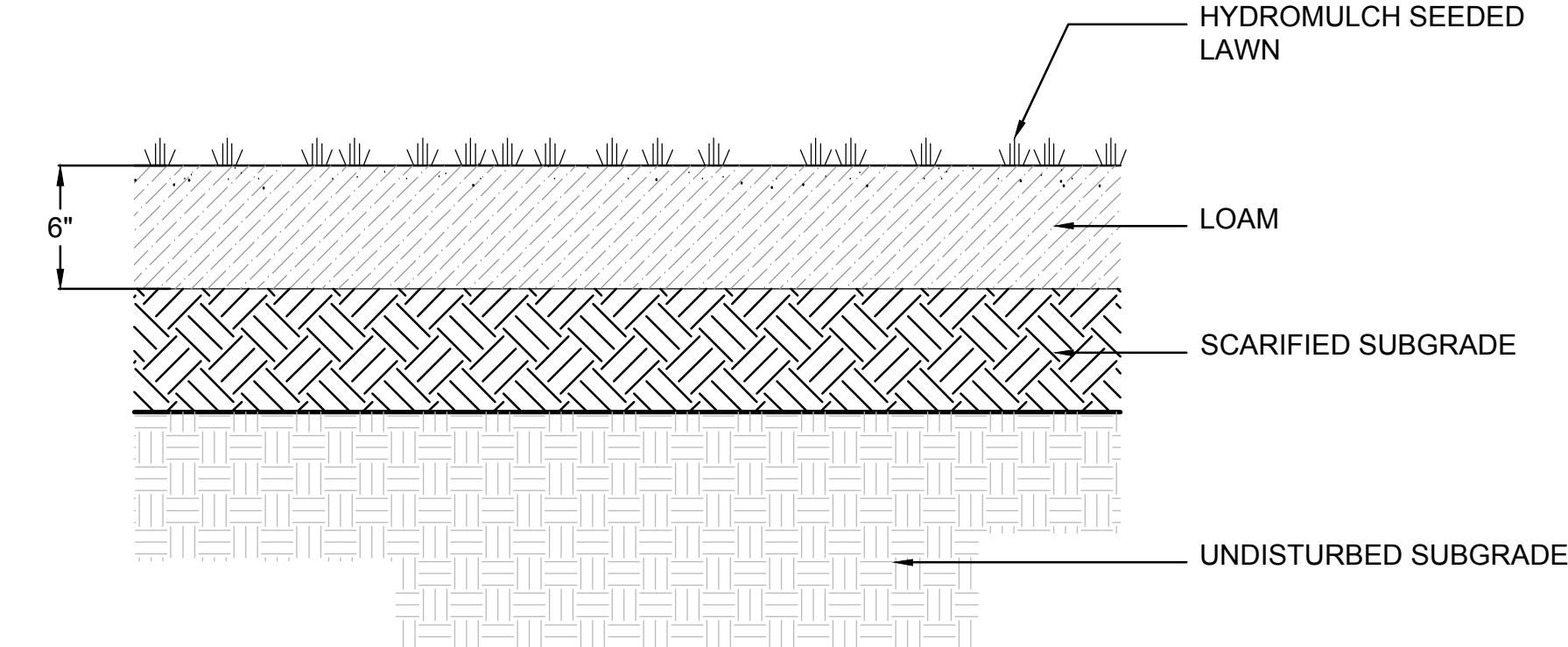


1. ALL INSTALLATION AND MATERIAL SPECIFICATIONS PER MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, LATEST EDITION.
2. ALL EXPOSED HMA IS TO BE TACKED PER MHD PRIOR TO NEW BITUMINOUS CONCRETE INSTALLATION.
3. ALL EXPOSED JOINTS ARE TO BE SEALED WITH TACK AND STONE DUST.
4. ANY TOP COURSE APPLIED AT A WIDTH OF 6' WIDE OR GREATER IS TO BE PLACED BY MACHINE/BOX SPREADER WHEN & AS DIRECTED BY THE TOWN ABINGTON.

2 TYPICAL TRENCH REPAIR & PAVEMENT SECTION DETAIL
SCALE: N.T.S.



5 TYPICAL STORM DRAIN TRENCH DETAIL
SCALE: N.T.S.



8 LOAM & SEED
SCALE: N.T.S.

- NOTES:
1. REFER TO THE LANDSCAPING PLAN FOR ADDITIONAL INFORMATION AND LOCATION OF LOAM AND SEED AREAS.

KAESTLE BOOS
associates, inc

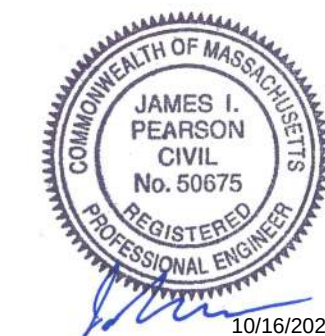
416 Slater Road, New Britain, CT 06053
Phone: 860-229-0361 ▲ Fax: 860-229-5303
Additional offices located in Massachusetts and Rhode Island
Email: kba@kba-architects.com ▲ Web: www.kba-architects.com

Consultants:
Weston & Sampson
Weston & Sampson Engineers, Inc.
100 Foxborough Boulevard, Suite 250
Foxborough, MA 02035
978.532.1900 800.SAMPSON
www.westonandsampson.com

Consulting Engineering
Services, LLC
128 Carnegie Row, Ste. 104
Norwood MA 02062
617.281.7161
ceseng.com
CES #2021530.00

ISSUE DATE	
DATE	DESCRIPTION
10/16/2024	BIDDING

REVISIONS	
DATE	DESCRIPTION

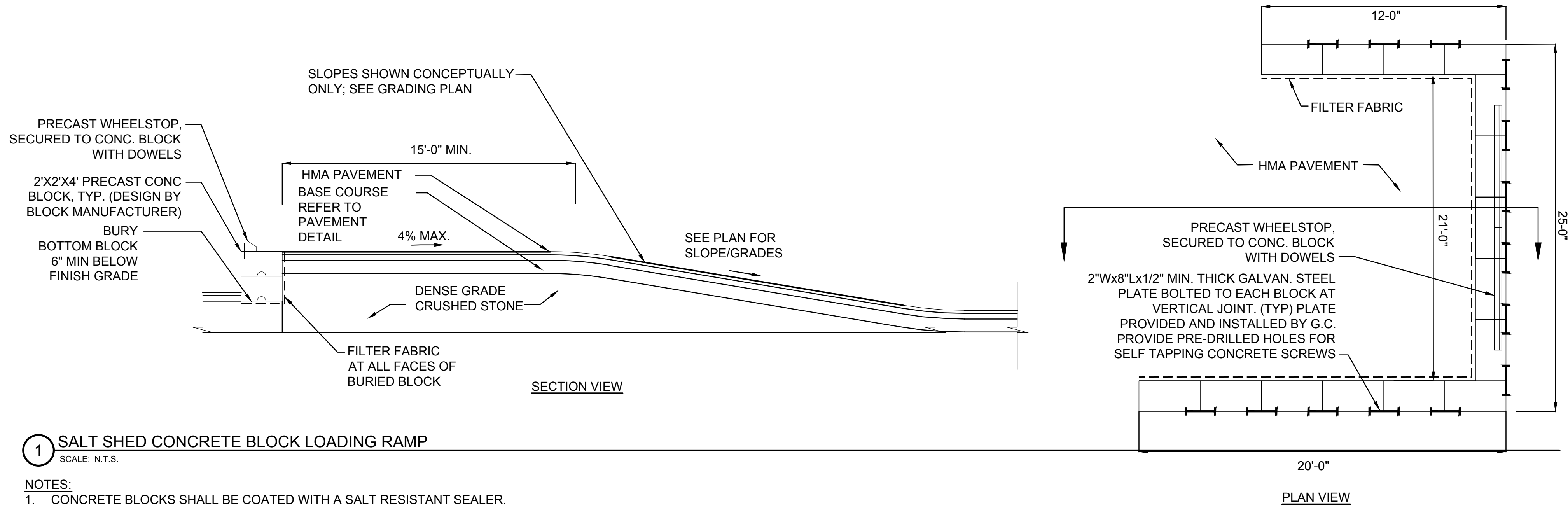


PHASE I - SALT
SHED, FUEL ISLAND
AND ASSOCIATED
SITE WORK
225 CENTRAL STREET
ABINGTON, MA, 02351

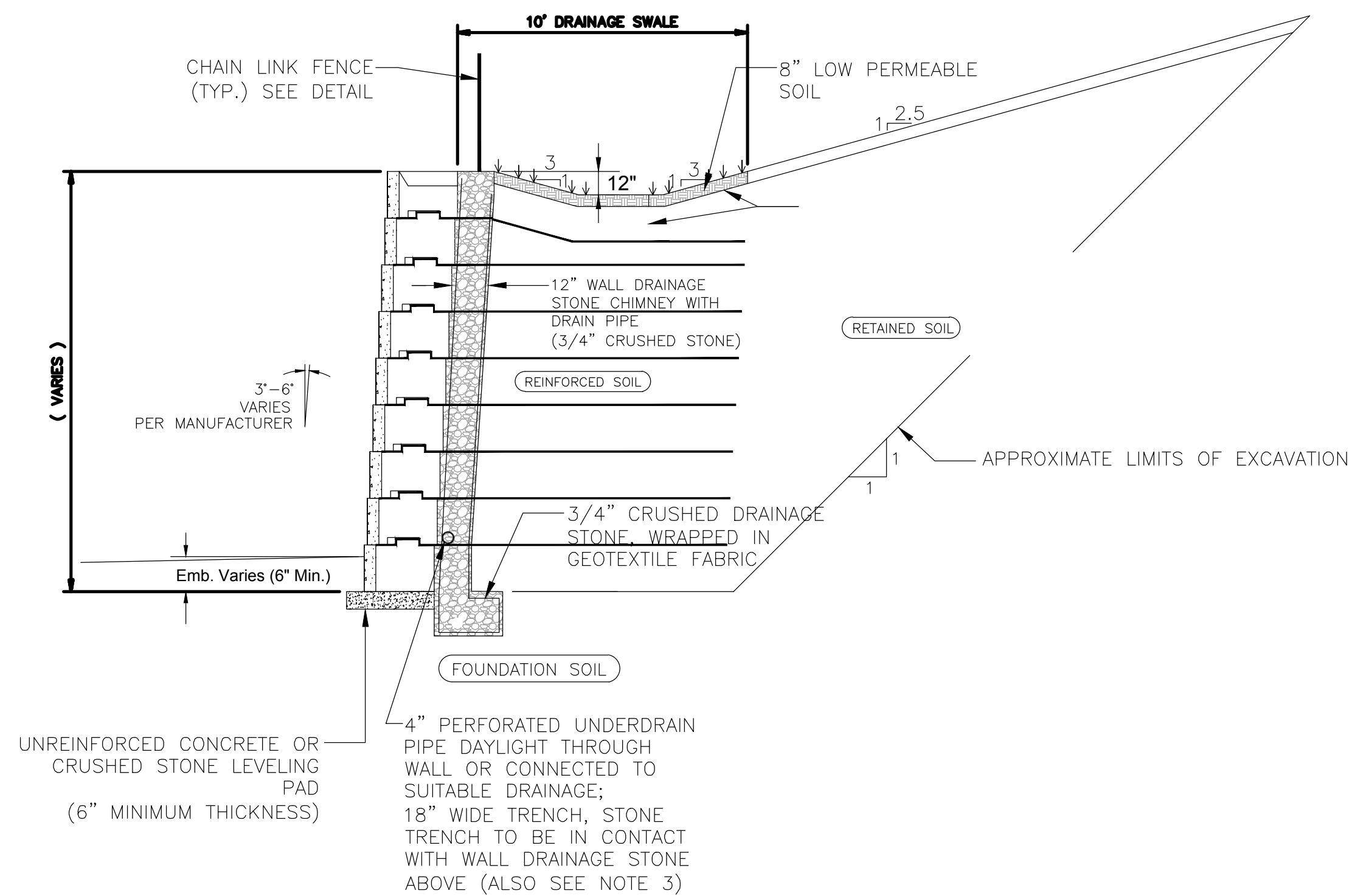
PROJECT NO.: ENG22-0465 DRAWN BY: CTP

SITE DETAILS 2

DRAWING NO.:
C602

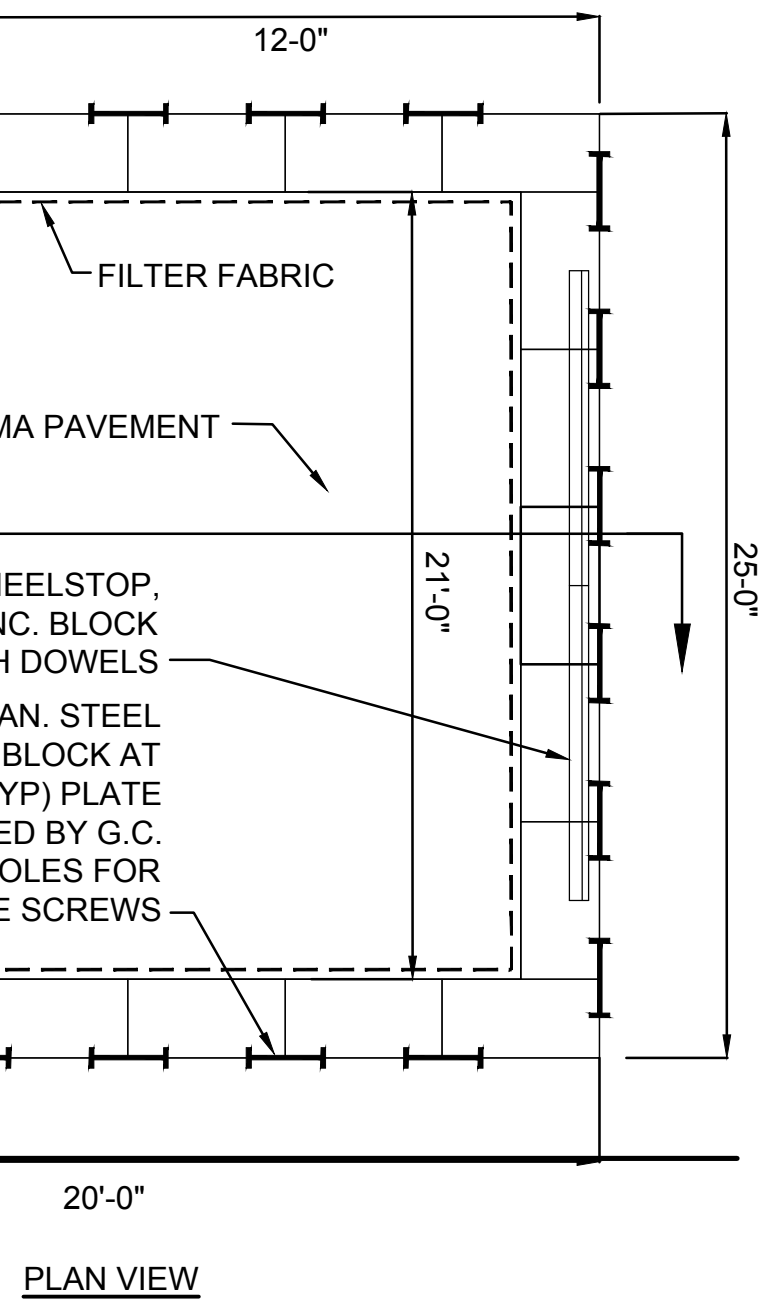


- 1 SALT SHED CONCRETE BLOCK LOADING RAMP**
SCALE: N.T.S.
- NOTES:**
1. CONCRETE BLOCKS SHALL BE COATED WITH A SALT RESISTANT SEALER.
 2. THIS TYPICAL DETAIL IS SHOW FOR ILLUSTRATIVE PURPOSES. THE CONTRACTOR SHALL SUBMIT LOADING RAMP DESIGN STAMPED BY A MASSACHUSETTS REGISTERED PROFESSIONAL ENGINEER. THE SUBMITTAL MUST BE APPROVED BY THE DESIGN ENGINEER PRIOR TO CONSTRUCTION.
 3. REFER TO SPECIFICATION SECTION 32 34 81 "BULK MATERIAL STORAGE BINS" FOR FURTHER DETAIL.

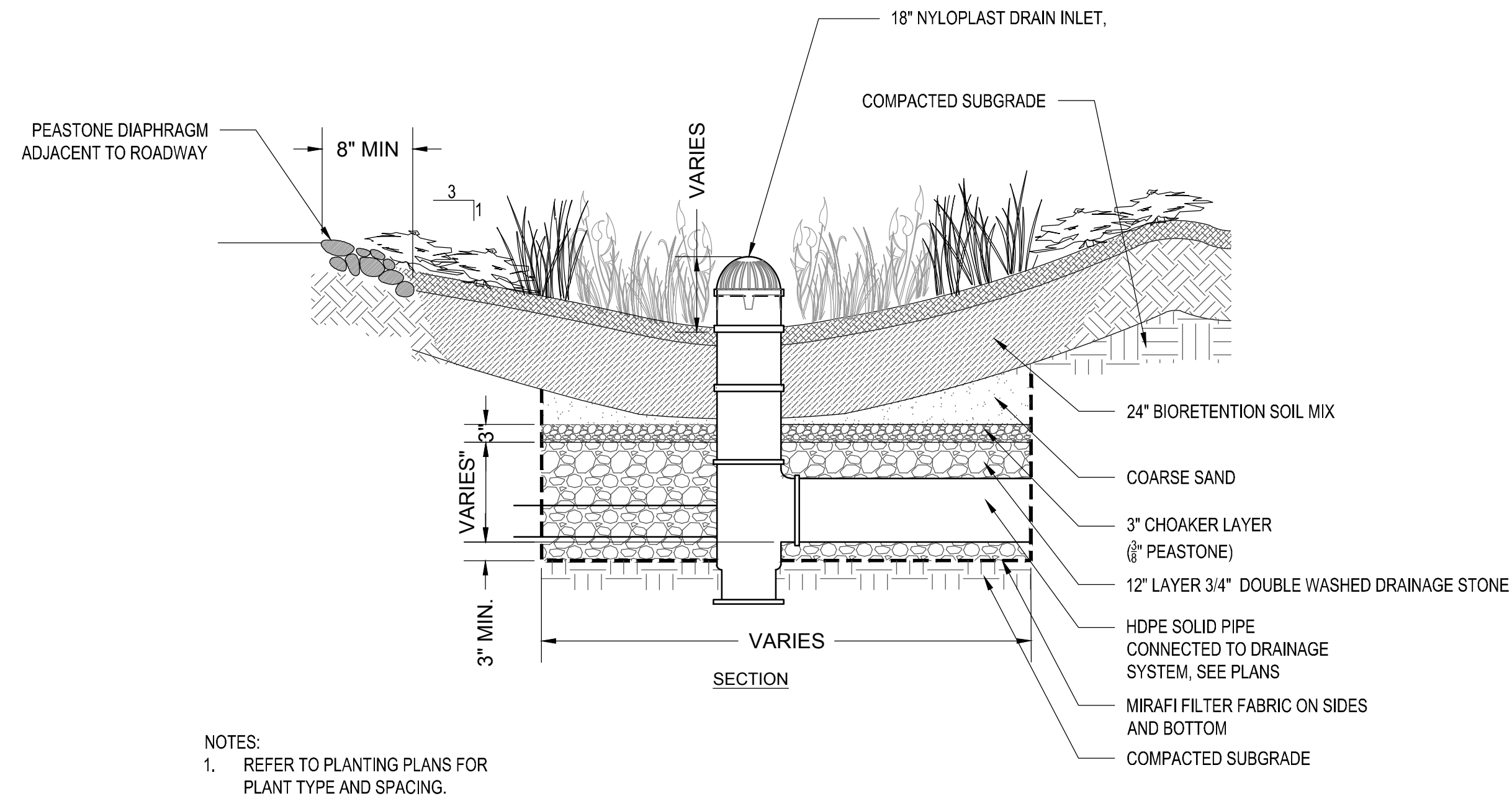


- NOTES:**
- 1) THIS TYPICAL DETAIL IS SHOWN FOR ILLUSTRATIVE PURPOSES. THE CONTRACTOR SHALL SUBMIT RETAINING WALL/GEGRID DESIGNS STAMPED BY A MASSACHUSETTS REGISTERED PROFESSIONAL ENGINEER. THE SUBMITTAL MUST BE APPROVED BY THE DESIGN ENGINEER PRIOR TO CONSTRUCTION. REFER TO SPECIFICATION SECTION 32 32 23.13 - SEGMENTAL RETAINING WALL SYSTEM.
 - 2) THE RETAINING WALL DESIGN CRITERIA SHALL INCLUDE (BUT NOT BE LIMITED TO) THE FOLLOWING:
 - A) EFFECTS OF LATERAL EARTH PRESSURE AND SLOPING GROUND.
 - B) SURCHARGE FROM SNOW STORAGE AT THE TOP OF THE WALL
 - C) EFFECTS OF SOIL SATURATION DUE TO GROUNDWATER
 - 3) WHERE THE PERFORATED PIPE AND STONE TRENCH EXTENDS BEYOND THE LIMITS OF THE RETAINING WALL, TRENCH SHALL BE 18" WIDE AND 12" HIGH
 - 4) DURING CONSTRUCTION, SURFACE WATER MUST BE DIRECTED AWAY FROM PARTIALLY CONSTRUCTED WALL AT THE END OF EACH DAY

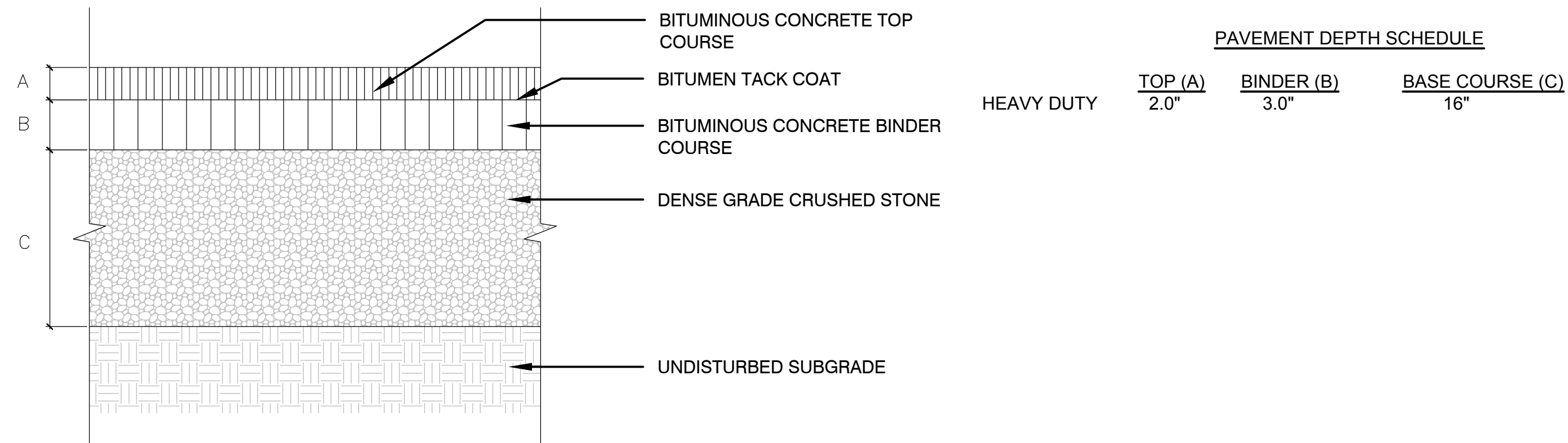
3 TYPICAL SEGMENTAL RETAINING WALL SYSTEM CROSS SECTION
SCALE: N.T.S.



- 2 BIORETENTION OUTLET CONTROL STRUCTURE (RGD-D1)**
SCALE: N.T.S.
- NOTES:**
1. OUTLET CONTROL STRUCTURE SHALL BE AS MANUFACTURED BY NYLOPLAST OR APPROVED EQUAL.
 2. OUTLET CONTROL STRUCTURE SHALL HAVE 2' DEEP SUMPS.



4 RAIN GARDEN
SCALE: N.T.S.



- NOTES:**
1. CONTRACTOR TO PROVIDE SMOOTH TRANSITION WHERE NEW PAVEMENT ABUTS EXISTING PAVEMENT, TYP.

5 TYPICAL PAVEMENT SECTION DETAIL
SCALE: N.T.S.

KAESTLE BOOS
associates, inc

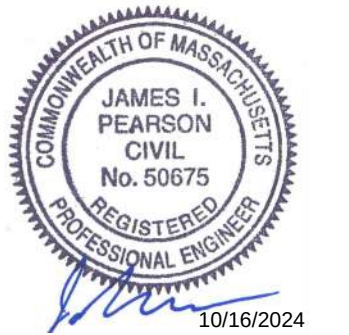
416 Slater Road, New Britain, CT 06053
Phone: 860-229-0361 ▲ Fax: 860-229-5303
Additional offices located in Massachusetts and Rhode Island
Email: kba@kba-architects.com ▲ Web: www.kba-architects.com

Consultants:
Weston & Sampson
Weston & Sampson Engineers, Inc.
100 Foxborough Boulevard, Suite 250
Foxborough, MA 02035
978.532.1900 800.SAMPSON
www.westonandsampson.com

CES Consulting Engineering Services, LLC
128 Carnegie Row, Ste. 104
Norwood MA 02062
617.261.7161
ceseng.com
CES #2021530.00

ISSUE DATE	
DATE	DESCRIPTION
10/16/2024	BIDDING

REVISIONS	
DATE	DESCRIPTION



PHASE I - SALT SHED, FUEL ISLAND AND ASSOCIATED SITE WORK
225 CENTRAL STREET ABINGTON, MA, 02351

PROJECT NO.: ENG22-0465 DRAWN BY: CTP

SITE DETAILS 3

DRAWING NO.:
C603

1.0 - GENERAL

- 1.01 THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ALL OTHER CONTRACT DRAWINGS AND SPECIFICATIONS. REFER TO CIVIL, ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR LOCATION, DIMENSIONS, AND DETAILS OF OPENINGS, SLEEVES, EMBEDMENTS, INSERTS, PADS, CURBS, DEPRESSIONS, ANCHOR BOLTS, AND OTHER PROJECT REQUIREMENTS NOT SHOWN ON STRUCTURAL DRAWINGS.
- 1.02 THE CONTRACTOR IS RESPONSIBLE FOR CHECKING, COORDINATING AND VERIFYING ALL DIMENSIONS IN THE FIELD PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL IMMEDIATELY REPORT ANY DISCREPANCY TO THE ARCHITECT AND ENGINEER AS A REQUEST FOR INFORMATION (RFI) BEFORE PROCEEDING WITH WORK.
- 1.03 THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING IN THE FIELD THE EXISTENCE AND LOCATION OF OVERHEAD, BURIED AND/OR EMBEDDED UTILITIES, AND DETERMINING LOCATIONS OF ALL EMBEDDED MECHANICAL, ELECTRICAL AND PLUMBING SYSTEMS AFFECTED BY THE WORK OF THIS CONTRACT.
- 1.04 ALL WORK IS TO CONFORM WITH THE FOLLOWING CODES AND STANDARDS:

- (A) "780 CMR, MASSACHUSETTS AMENDMENTS MASSACHUSETTS STATE BUILDING CODE" - 10TH EDITION (MSBC)
(B) INTERNATIONAL BUILDING CODE, (IBC 2021)
(C) "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" - AMERICAN CONCRETE INSTITUTE (ACI 318)
(D) "MANUAL OF STEEL CONSTRUCTION" - AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC 360)
(E) "STRUCTURAL WELDING CODE - STEEL" - AMERICAN WELDING SOCIETY (AWS D1.1)
(F) "SEISMIC PROVISION FOR STRUCTURAL STEEL BUILDINGS" - AMERICAN INSTITUTE OF STEEL CONSTRUCTION, (AISC)
(G) "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES" - AMERICAN SOCIETY OF CIVIL ENGINEERS, (ASCE 7-16)

FOR ADDITIONAL CODES AND STANDARDS REFER TO SPECIFICATIONS.

- 1.05 THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER OF UNFORESEEN CONDITIONS THAT MAY BE UNCOVERED DURING DEMOLITION AND CONSTRUCTION AS A REQUEST FOR INFORMATION (RFI) BEFORE PROCEEDING WITH WORK.
- 1.06 PERMANENT STRUCTURAL ELEMENTS TO BE DESIGNED IN ACCORDANCE WITH PERFORMANCE SPECIFICATIONS INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
- (A) PRE-ENGINEERED FABRIC STRUCTURE
(B) MISC. ARCH COMPONENT SEISMIC SUPPORTS
(C) MISC. MECHANICAL AND ELECTRICAL COMPONENT AND SYSTEM SEISMIC SUPPORTS

FOR PERFORMANCE DESIGN REQUIREMENTS OF ELEMENTS LISTED ABOVE, REFER TO ADDITIONAL NOTES ON THESE SHEETS AND IN THE TECHNICAL SPECIFICATIONS. ALL DESIGN SUBMITTAL DRAWINGS AND CALCULATIONS SHALL BE CERTIFIED, SIGNED AND SEALED BY A PROFESSIONAL STRUCTURAL ENGINEER REGISTERED IN THE STATE OF MASSACHUSETTS.

- 1.07 STRUCTURAL REQUIREMENTS TO ACCOMMODATE FIXED EQUIPMENT, INCLUDING BUT NOT LIMITED TO ROOF TOP UNITS ARE INCIDENTAL TO THE DESIGN OF A SPECIFIC EQUIPMENT MANUFACTURER. ALL WORK SHALL CONFORM TO APPROVED EQUIPMENT MANUFACTURER'S SHOP DRAWINGS AND INSTALLATION INSTRUCTIONS. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL ANY REQUIRED MODIFICATIONS TO ACCOMMODATE APPROVED EQUIPMENT DRAWINGS. SUCH MODIFICATIONS SHALL BE MADE AT NO COST TO THE OWNER.
- 1.08 DETAILS AND NOTES SHOWN ON STRUCTURAL DRAWINGS SHALL BE APPLICABLE TO ALL PARTS OF THE STRUCTURAL WORK EXCEPT WHERE SPECIFICALLY REQUIRED OTHERWISE BY CONTRACT DOCUMENTS. CONDITIONS NOT SPECIFICALLY SHOWN SHALL BE SIMILAR TO THOSE SHOWN FOR LIKE CONDITIONS AS DETERMINED BY THE ENGINEER.
- 1.09 IN ACCORDANCE WITH SPECIFICATION SECTION 01 45 23, TESTING AND INSPECTION OF STRUCTURAL WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE COSTS FOR TESTING AND INSPECTIONS WILL BE PAID BY THE CONTRACTOR. PROVIDE TEST RESULTS TO THE ENGINEER IN A TIMELY MANNER.
- 1.10 THE CONTRACTOR SHALL DESIGN AND PROVIDE ALL REQUIRED SHORING AND TEMPORARY BRACING TO RESIST FORCES ON THE STRUCTURE THROUGHOUT THE CONSTRUCTION PERIOD.

2.0 - FOUNDATIONS

- 2.01 THE SUBSURFACE CONDITIONS DESCRIBED IN THE DRAWINGS, SPECIFICATIONS, TEST BORINGS AND TEST PITS ARE INCLUDED ONLY TO ASSIST THE CONTRACTOR DURING BIDDING AND SUBSEQUENT CONSTRUCTION AND REPRESENT CONDITIONS ONLY AT THESE SPECIFIC LOCATIONS AT THE TIME THEY ARE MADE.
- 2.02 THE CONTRACTOR SHALL DESIGN AND PROVIDE ALL TEMPORARY EARTH SUPPORT, SHORING AND BRACING REQUIRED TO PERFORM THE WORK IN ACCORDANCE WITH OSHA, STATE AND LOCAL REQUIREMENTS.
- 2.03 THE CONTRACTOR SHALL DESIGN AND PROVIDE SHEETING, SHORING, BRACING, AND/OR UNDERPINNING IN ORDER TO PROTECT EXISTING UTILITIES FROM EXCESSIVE MOVEMENTS DURING THE CONSTRUCTION PERIOD. IN ACCORDANCE WITH OSHA, STATE & LOCAL REQUIREMENTS.
- 2.04 THE CONTRACTOR SHALL CARRY OUT CONTINUOUS CONTROL OF SURFACE AND SUBSURFACE WATER. DEWATER ANY AREAS REQUIRING EXCAVATION IN ADVANCE OF PERFORMING EXCAVATION. MAINTAIN GROUNDWATER LEVELS AT LEAST 2 FEET BELOW PLANNED SUBGRADES.
- 2.05 ALL SUBGRADES TO RECEIVE FILL MATERIALS, FOUNDATIONS, SLABS OR OTHER CONSTRUCTION SHALL BE FREE OF RUNNING OR STANDING WATER PRIOR TO PLACEMENT.
- 2.06 SPREAD FOOTINGS AND PIERS AS SHOWN ARE DESIGNED FOR ESTIMATED METAL BUILDING REACTIONS AND ARE APPROXIMATE IN SIZE. THESE ELEMENTS ARE SUBJECT TO CHANGE IN DIMENSION (IF REQUIRED) WITH THE APPROVED METAL BUILDING SUBMITTAL. ANY CHANGES SHALL COME AT NO ADDITIONAL COST TO THE OWNER.
- 2.07 FOUNDATIONS SHALL BE INSTALLED IN THE GEOMETRY SHOWN IN THE PLANS, ANY ROCK ENCOUNTERED DURING EXCAVATION SHALL BE REMOVED TO CLEAR THE REQUIRED FOUNDATION GEOMETRY.
- 2.08 SPREAD FOOTING BEARING SURFACES SHALL BE EXCAVATED BY EQUIPMENT WITH A SMOOTH, TOOTHLESS CUTTING EDGE.
- 2.09 THE GEOTECHNICAL REPORT PREPARED BY WESTON & SAMPSON DATED 03/07/2024 IS PROVIDED FOR INFORMATION PURPOSES ONLY.

3.0 - CAST IN PLACE CONCRETE

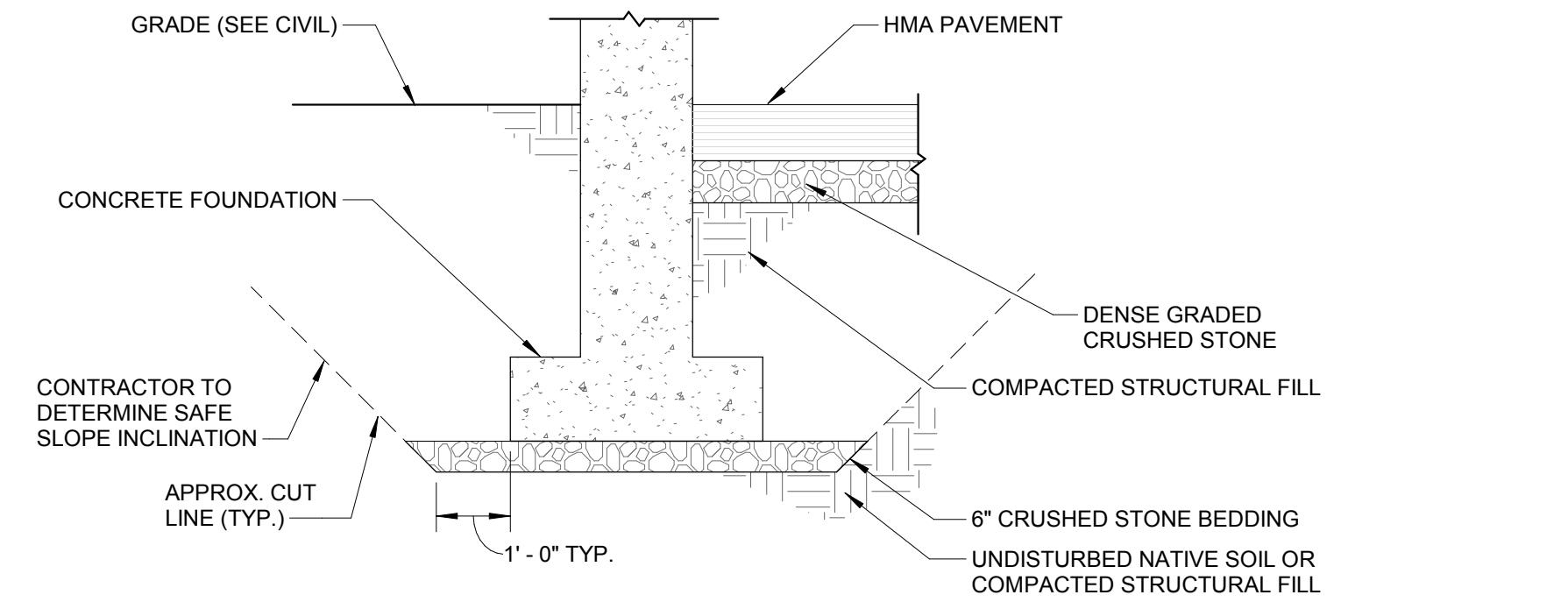
- 3.01 CONCRETE WORK SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318) AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301).
- 3.02 CONCRETE SHALL BE CONTROLLED CONCRETE, PROPORTIONED, MIXED AND PLACED IN THE PRESENCE OF A REPRESENTATIVE OF AN APPROVED TESTING AGENCY.
- 3.03 UNLESS NOTED OTHERWISE, CONCRETE SHALL BE NORMAL WEIGHT AND HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH AS FOLLOWS:
- (A) FOOTINGS: 4500 PSI
(B) FOUNDATION WALLS AND PIERS: 5000 PSI
- 3.04 ALL PERMANENTLY EXPOSED VERTICAL AND HORIZONTAL CONCRETE SURFACES SHALL BE TREATED OR SEALED IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
- 3.05 CONCRETE WORK SHALL BE COORDINATED WITH ALL METAL BUILDINGS, ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL WORK, AND ALL EQUIPMENT. THE CONTRACTOR SHALL VERIFY INSTALLATION AND LOCATIONS OF ALL EMBEDDED ITEMS INCLUDING BUT NOT LIMITED TO INSERTS, ANCHOR BOLTS, DOWELS, BLOCKOUTS, SLEEVES, EMBEDDED PIPING, AND EMBEDDED CONDUIT PRIOR TO CONCRETE PLACEMENT.
- 3.06 FOR STRUCTURAL ELEMENTS, THE LOCATIONS AND MAXIMUM SPACING OF VERTICAL JOINTS SHALL BE AS FOLLOWS:
- | ELEMENT | JOINT TYPE | SPACING, FT. | LOCATIONS |
|-----------------|--------------|--------------|-----------|
| FOUNDATION WALL | CONSTRUCTION | FACE OF | |
| FOUNDATION WALL | CONSTRUCTION | 60 | PILASTER |
- 3.07 FOR SLABS-ON-GRADE, LOCATE CONSTRUCTION OR CONTROL JOINTS ALONG COLUMN LINES OR AS SHOWN. PROVIDE JOINTS AT 20FT. MAX. SPACING. SUBMIT JOINT LOCATIONS AND DETAILS FOR APPROVAL.
- 3.08 SEALANT FOR CONTROL/CONSTRUCTION JOINTS AND SAW CUT JOINTS SHALL BE SIKADUR 51 MANUFACTURED BY SIKA OR AN APPROVED EQUAL.
- 3.09 CONCRETE EXPOSED TO WEATHER (FREEZE-THAW CONDITIONS) IN THE FINISHED PROJECT SHALL BE AIR ENTRAINED PER SPECIFICATIONS REQUIREMENTS.
- 3.10 A MINIMUM OF 72 HOURS SHALL ELAPSE BETWEEN ADJACENT CONCRETE PLACEMENTS.
- 3.11 CONCRETE SLABS SHALL BE PLACED SO THAT THE SLAB THICKNESS IS AT NO POINT LESS THAN THAT INDICATED ON THE DRAWINGS.
- 3.12 PROVIDE A 3/4" CHAMFER ON ALL VERTICAL AND HORIZONTAL CORNERS EXPOSED TO VIEW UNLESS NOTED OTHERWISE.
- 3.13 ALL CONCRETE SHALL BE WATER CURED UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.
- 3.14 NON-SHRINK, NON-METALLIC, GROUT SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 7,500 PSI (ASTM C842) AND A MINIMUM BOND STRENGTH OF 2,000 PSI AT 28-DAYS (ASTM C882). GROUT MAY BE EXTENDED WITH COARSE AGGREGATE PER THE MANUFACTURER'S RECOMMENDATIONS.
- 3.15 WHEN NEW CONCRETE IS CAST AGAINST EXISTING CONCRETE SURFACES, UNLESS NOTED OTHERWISE, THE EXISTING CONCRETE SHALL BE ROUGHENED TO 1/4" AMPLITUDE, THOROUGHLY CLEANED BY POWER WASHING OR OTHER MEANS, AND BE A SATURATED SURFACE DRY CONDITION IMMEDIATELY PRIOR TO PLACING CONCRETE.

4.0 - CAST IN PLACE CONCRETE REINFORCEMENT

- 4.01 REINFORCEMENT DETAILING, FABRICATION, AND ERECTION SHALL CONFORM TO "ACI DETAILING MANUAL" - SP-66, "CRSI MANUAL OF STANDARD PRACTICE".
- 4.02 STEEL REINFORCEMENT, UNLESS NOTED OTHERWISE, SHALL CONFORM TO THE FOLLOWING:
- (A) BARS, TIES, AND STIRRUPS: ASTM A615 GRADE 60
(B) WELDED WIRE FABRIC: ASTM A195, FLAT SHEETS
- 4.03 REINFORCING STEEL SHALL BE EPOXY COATED AND DEFORMED.
- 4.04 MINIMUM CONCRETE PROTECTIVE COVERING FOR REINFORCEMENT, UNLESS REQUIRED FOR FIRE PROTECTION OR NOTED OTHERWISE, SHALL BE AS FOLLOWS:
- (A) CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
(B) CONCRETE EXPOSED TO EARTH OR WEATHER:
(1) NO. 6 THRU NO. 18 BARS: 2"
(2) NO. 5 BAR, W31 OR D31 WIRE AND SMALLER: 2"
(C) SURFACES NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
(1) SLABS, WALLS, JOISTS:
(a) NO. 14 AND NO. 18 BARS: 2"
(b) NO. 11 BARS AND SMALLER: 2"
(2) BEAMS, COLUMNS:
(a) PRIMARY REINFORCEMENT: 2-1/2"
(b) TIES, STIRRUPS, SPIRALS: 2"
- 4.05 REINFORCING STEEL SHALL BE CONTINUOUS THROUGH ALL CONSTRUCTION JOINTS, CORNERS, AND INTERSECTIONS UNLESS OTHERWISE NOTED. REINFORCING SHALL BE LAPPED AT NECESSARY SPLICES OR HOOKED AT DISCONTINUOUS ENDS, UNLESS OTHERWISE NOTED.
- 4.06 FOR REINFORCING STEEL SPLICE LAP LENGTHS REFER TO THE TABLE PROVIDED UNLESS OTHERWISE INDICATED.
- 4.07 MECHANICAL SPLICES SHALL BE PERMITTED SUBJECT TO APPROVAL BY THE ENGINEER. MECHANICAL SPLICES SHALL DEVELOP AT LEAST 125 PERCENT OF THE SPECIFIED YIELD STRENGTH OF THE BAR. NO WELDED CONNECTIONS ARE PERMITTED.
- 4.08 WELDED WIRE FABRIC SHALL BE LAPPED (1 SQUARE PLUS 2) INCHES WHERE REQUIRED AND SHALL BE WIRED TOGETHER AT ALL LAPS. WWF SHALL BE SUPPORTED BY CHAIRS AND/OR CARRYING BARS PRIOR TO CONCRETE PLACEMENT.
- 4.09 REINFORCEMENT SHALL NOT BE TACK WELDED.

4.0 - CAST IN PLACE CONCRETE REINFORCEMENT CONT.

- 4.10 NOTIFY THE TESTING LAB AND ENGINEER A MINIMUM OF 48 HOURS PRIOR TO SCHEDULED CONCRETE PLACEMENT IN ORDER TO ACCOMMODATE INSPECTION OF REINFORCEMENT AND CONCRETE TESTING. NO CONCRETE SHALL BE PLACED WITHIN 48 HOURS OF SUCH NOTIFICATION.
- 4.11 WHERE REINFORCEMENT IS NOT SHOWN ON DRAWINGS, PROVIDE REINFORCEMENT IN ACCORDANCE WITH APPLICABLE DETAILS AS DETERMINED BY THE ARCHITECT AND ENGINEER. IN NO CASE SHALL REINFORCEMENT BE LESS THAN THE MINIMUM REINFORCEMENT PERMITTED BY THE CODES, NOR LESS THAN THE FOLLOWING:
- (A) BEAM STIRRUPS: #3 @ 12"
(B) BEAM STIRRUP SUPPORTS: 1-#5 AT EACH STIRRUP BEND
(C) FACE REINFORCEMENT IN BEAMS OR PORTIONS OF BEAMS #4 @ 12" E.F.
(D) STRUCTURAL SLABS: 0.0020 X GROSS CONCRETE AREA IN EACH DIRECTION
(E) CONCRETE WALLS: 0.0025 X GROSS CONCRETE AREA IN EACH DIRECTION
- 4.12 WHERE REINFORCEMENT IS REQUIRED IN SECTION, REINFORCEMENT IS CONSIDERED TYPICAL WHEREVER THE SECTIONS APPLIES.
- 4.13 WHERE THERE IS CONFLICT BETWEEN LOCATIONS OF COLUMN VERTICAL BARS AND BEAM HORIZONTAL BARS, THE COLUMN BARS SHALL REMAIN IN THEIR DESIGNATED POSITIONS AND BEAM BAR LOCATIONS SHALL BE ADJUSTED.
- 4.14 DOWELS SHALL MATCH BAR SIZE, NUMBER AND SPACING, UNLESS NOTED OTHERWISE.
- 5.0 - DESIGN LOADS:
- 5.01 GENERAL DESIGN REQUIREMENT (IBC 2021, SECTION 1604)
(A) RISK CATEGORY: IV (ASCE 7-16, TABLE 1.1-1)
(B) MUNICIPALITY: ABINGTON, MA (780 CMR, TABLE 1604.11)
- 5.02 DESIGN LOADS
(A) SELF-WEIGHT OF ALL ATTACHED AND SUSPENDED ELEMENTS
- 5.03 LIVE LOADS: 20 PSF, 300 LB
(B) ROOF LIVE LOADS
- 5.04 ROOF SNOW LOAD (IBC 2021, SECTION 1608)
(A) GROUND SNOW LOAD, Pg: 35 PSF (780 CMR, TABLE 1604.11)
(B) MINIMUM FLAT ROOF SNOW LOAD, Pf: 25 PSF (ASCE 7-16)
(C) SNOW EXPOSURE FACTOR, Ce: 1.1 (ASCE 7-16, TABLE 7-2)
(D) THERMAL FACTOR, Ct: 1.2 (ASCE 7-16, TABLE 7-3)
(E) SNOW LOAD IMPORTANCE FACTOR, Is: 1.2 (ASCE 7-16, TABLE 7-4)
(F) ROOF SLOPE FACTOR, Cs: 1.0 (ASCE 7-16, FIGURE 7-2)
(G) * ADJUST FOR SNOW DRIFT AND UNBALANCED SNOW LOADING (MSBC 780 CMR)
- 5.05 WIND LOADS (IBC 2021, SECTION 1609)
(A) BASIC WIND SPEED, V (3-SECOND GUST WIND SPEED): 136 MPH (780 CMR, TABLE)
(B) BUILDING ENCLOSURE CLASSIFICATION: ENCLOSED (ASCE 7-16, SEC. 6.2)
(C) WIND EXPOSURE CATEGORY: C (ASCE 7-16, SEC. 6.5.6.3)
(D) DESIGN BUILDING DIMENSIONS
(E) COMPONENTS AND CLADDING (ASCE 7-16, SEE TABLE)
(1) ANALYSIS PROCEDURE: LOW RISE BUILDINGS (ASCE 7-16)
(a) WIND DIRECTIONALITY FACTOR, Kd: 0.85 (ASCE 7-16, TABLE 26.6-1)
(b) TOPOGRAPHIC FACTOR, Kzt: 1.0 (ASCE 7-16, SECTION 26.8)
(c) VELOCITY PRESSURE COEFFICIENT, Kz: 0.94 (ASCE 7-16, TABLE 26.3-1)
(d) INTERNAL PRESSURE COEFFICIENT, GCpf: +/-0.18 (ASCE 7-16, TABLE 26.11-1)
- 5.06 EARTHQUAKE LOADS (IBC 2021, SECTION 1613)
(A) SITE CLASS: D
(B) SPECTRAL RESPONSE ACCELERATIONS
(1) Ss: 0.223 (ASCE 7-16 HAZARD TOOL)
(2) S1: 0.059 (ASCE 7-16 HAZARD TOOL)
(C) SPECTRAL RESPONSE COEFFICIENTS
(1) Sds: 0.238 (ASCE 7-16, SEC. 11.4.3)
(2) Sd1: 0.094 (ASCE 7-16, SEC. 11.4.3)
(D) SEISMIC DESIGN CATEGORY: C (ASCE 7-16, SEC. 11.6-1)
(E) SEISMIC IMPORTANCE FACTOR, Ie: 1.5 (ASCE 7-16, TABLE 11.5-1)
(F) SEISMIC FORCE RESISTING SYSTEM: (780 CMR, TABLE 12.2-1)
(1) STEEL SYSTEM NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE
(a) RESPONSE MODIFICATION COEFFICIENT, R: 3
(b) SYSTEM OVERSTRENGTH PARAMETER, oo: 3
(c) DEFLECTION AMPLIFICATION FACTOR, Cd: 3
- (G) ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE ANALYSIS (ASCE 7-16, SEC. 12.8)



FOUNDATION NOTE(S):

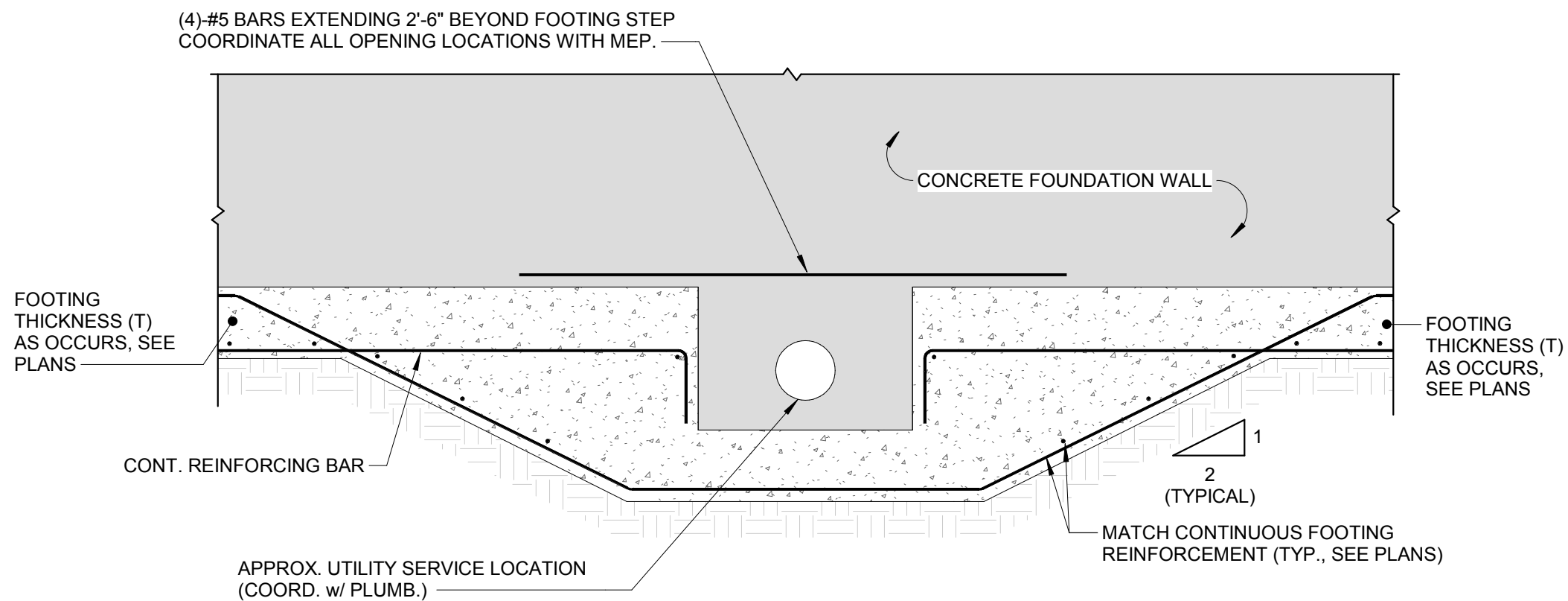
- UNDOCUMENTED FILL AND LOOSE OR DISTURBED SOILS SHALL BE REMOVED FROM ALL FOUNDATION AREAS. THE CONTRACTOR SHALL CONTACT THE ENGINEER PRIOR TO FOUNDATION CONSTRUCTION TO OBSERVE ALL FOUNDATION SUBGRADES. REFER TO EARTHWORK SPECIFICATION FOR LIMITS OF UNSUITABLE SOILS REMOVAL AND BACKFILL REQUIREMENTS BELOW FOUNDATIONS AND SLABS.
- 6-INCHES OF CRUSHED STONE SHALL BE PLACED AND COMPACTED AT THE BASE OF FOOTING EXCAVATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR SUBGRADE PROTECTION.
- SUBGRADES SHALL BE PROOF ROLLED USING A FULLY LOADED 10-WHEELED DUMP TRUCK. REFER TO GEOTECHNICAL REPORT FOR OTHER PROOF ROLLING REQUIREMENTS.

SLAB NOTE(S):

- A MINIMUM OF 12-INCHES OF DENSE GRADED CRUSHED STONE SHALL BE PLACED BELOW SLABS. REFER TO EARTHWORK SPECIFICATION FOR PLACEMENT AND COMPACTION REQUIREMENTS. THE CONTRACTOR SHALL CONTACT THE ENGINEER PRIOR TO PLACEMENT TO EVALUATION SUBGRADE CONDITIONS.
- REFER TO EARTHWORK SPECIFICATION FOR LIMITS OF UNSUITABLE SOILS REMOVAL AND BACKFILL REQUIREMENTS BELOW FOUNDATIONS AND SLABS.
- IF UNDERSLAB STONE IS TRAPPING WATER, THE WATER SHALL BE REMOVED PRIOR TO SLAB PLACEMENT.
- SUBGRADES SHALL BE PROOF ROLLED USING A FULLY LOADED 10-WHEELED DUMP TRUCK. REFER TO GEOTECHNICAL REPORT FOR OTHER PROOF ROLLING REQUIREMENTS.

1 TYPICAL CUT/FILL DETAIL

N.T.S.



NOTE(S):

- REFER TO ARCH./CIVIL/GEOTECHNICAL DETAILS FOR ADDITIONAL UNDER SLAB & FOUNDATION REQUIREMENTS NOT SHOWN ON THESE DRAWINGS. REQUIREMENTS MAY INCLUDE BUT ARE NOT LIMITED TO: PERIMETER DRAINS, INSULATION, WEEP HOLES, & SITE PREPARATION. REPORT ANY DISCREPANCIES BETWEEN DISCIPLINES TO AE FOR CLARIFICATION PRIOR TO PROCEEDING WITH WORK.

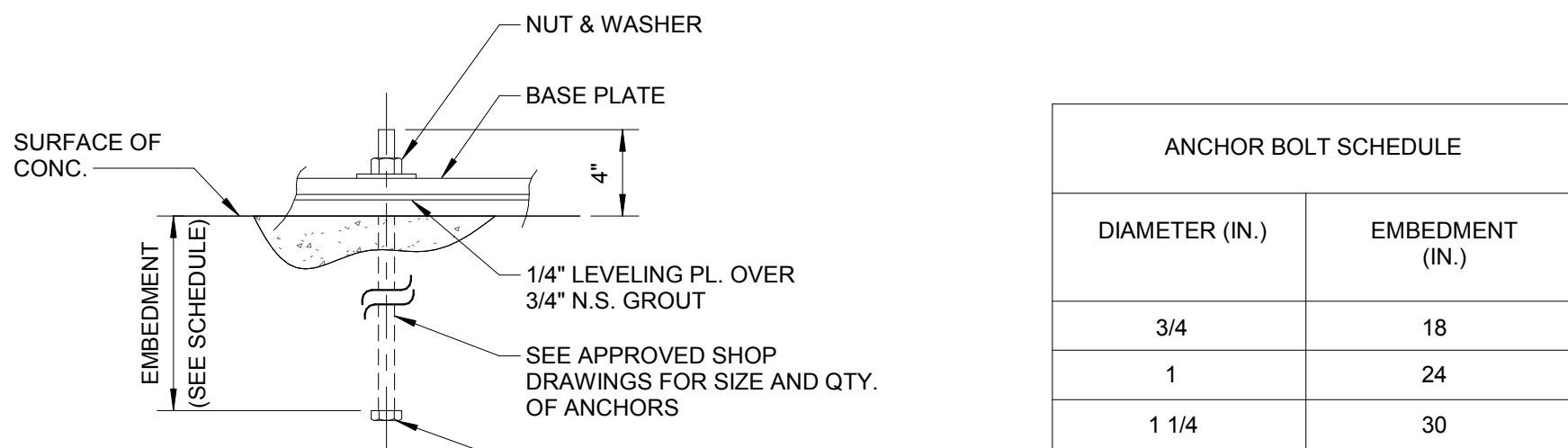
2 UTILITY OPENING

N.T.S.

TENSION DEVELOPMENT & SPLICE LENGTHS FOR BARS				
BAR SIZE	Fc = 4,000 PSI		Fc = 5,000 PSI	
	TOP BARS (IN.)	OTHER BARS (IN.)	TOP BARS (IN.)	OTHER BARS (IN.)
#3	32	25	29	22
#4	42	33	38	29
#5	53	41	47	36
#6	63	49	57	44
#7	92	71	82	64
#8	105	81	94	73
#9	118	91	106	82
#10	131	101	118	91
#11	145	111	129	100

3 MINIMUM SPLICE DEVELOPEMENT LENGTHS

N.T.S.



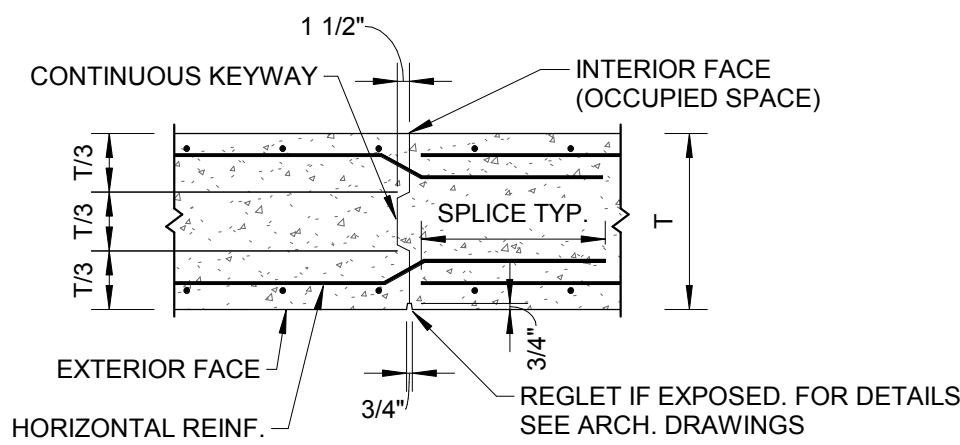
ANCHOR BOLT SCHEDULE	
DIAMETER (IN.)	EMBEDMENT (IN.)
3/4	18
1	24
1 1/4	30

NOTE(S):

- ANCHORS SHALL BE AS SPECIFIED BY THE SALT SHED STEEL TRUSS DESIGNER, PROVIDED AND INSTALLED BY CONTRACTOR.
- ANCHORS SHALL CONFORM TO ASTM F1554 GRADE 55 STEEL. ANCHOR BOLTS SHALL BE WELDABLE, CONFORMING TO SUPPLEMENTARY REQUIREMENT S1.
- ANCHORS BOLTS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153.

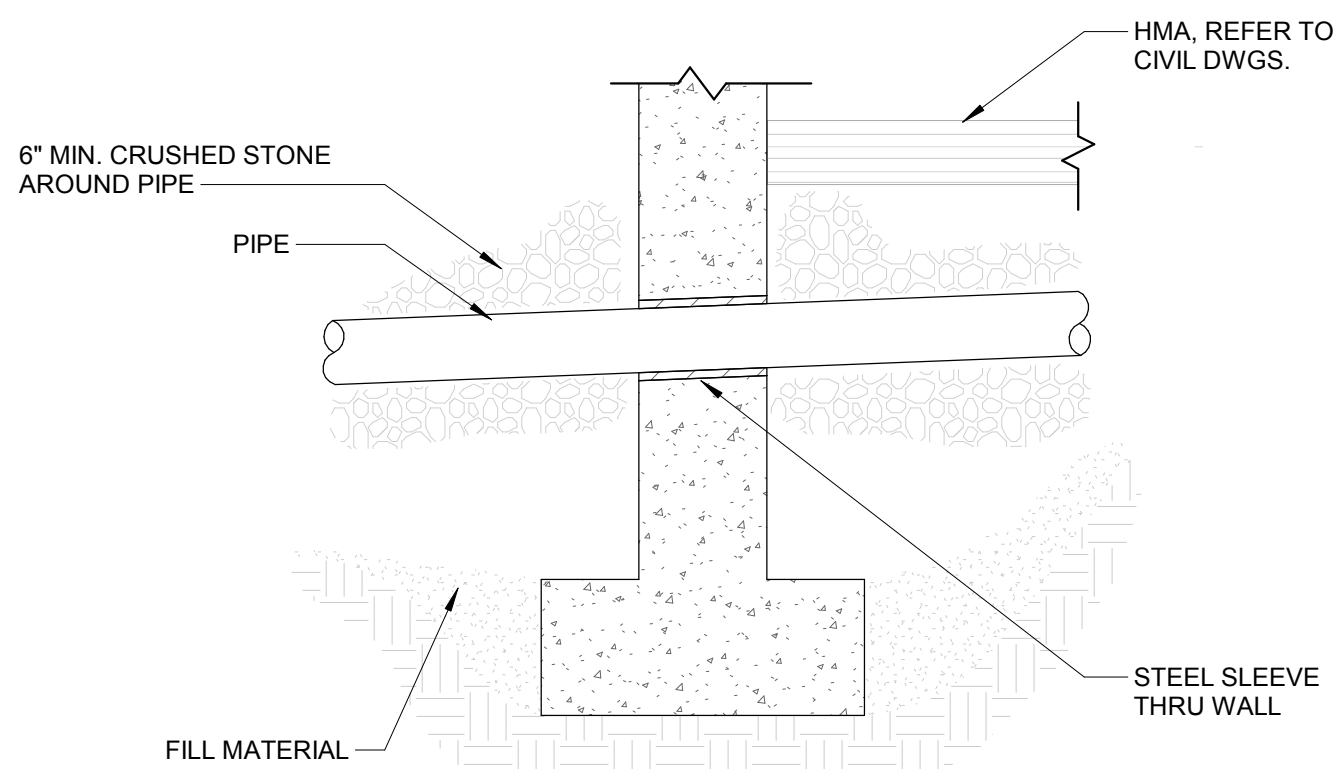
4 ANCHOR BOLT DETAIL

N.T.S.



5 VERTICAL CONSTRUCTION JOINT

N.T.S.



NOTE(S):

- PIPE SHALL NOT PASS UNDER OR THRU WALL FOOTING. LOWER FOOTING BY STEPPING TO AVOID INTERFERENCE.

6 PIPE THROUGH FOUNDATION WALL

N.T.S.

KAESTLE BOOS
associates, inc

416 Slater Road, New Britain, CT 06053
Phone: 860-229-0361 • Fax: 860-229-5303
Additional offices located in Massachusetts and Rhode Island
Email: kba@kba-architects.com • Web: www.kba-architects.com

Consultants:

Weston & Sampson

Weston & Sampson Engineers, Inc.
100 Foxborough Boulevard, Suite 250
Foxborough, MA 02035
978.532.1900 800.SAMPSON

www.westonandsampson.com

Consulting Engineering
Services, LLC
128 Carnegie Row, Ste. 104
Norwood MA 02062
617.251.1761
ceseng.com
CES #2021530.00



ISSUE DATE

DATE DESCRIPTION
10/16/2024 BID DOCUMENTS

REVISIONS

DATE DESCRIPTION

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS,
AND GENERAL NOTES SEE SHEETS APW011 AND
APW012

KEY PLAN

SCALE: AS NOTED



PHASE I - SALT
SHED, FUEL ISLAND
AND ASSOCIATED
SITE WORK

225 CENTRAL STREET,
ABINGTON, MA 02351

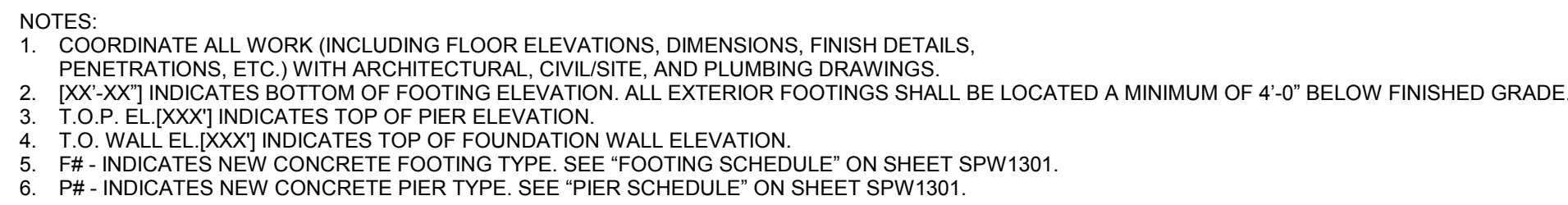
PROJECT NO.: ENG22-0465

DRAWN BY: ERL/AKR

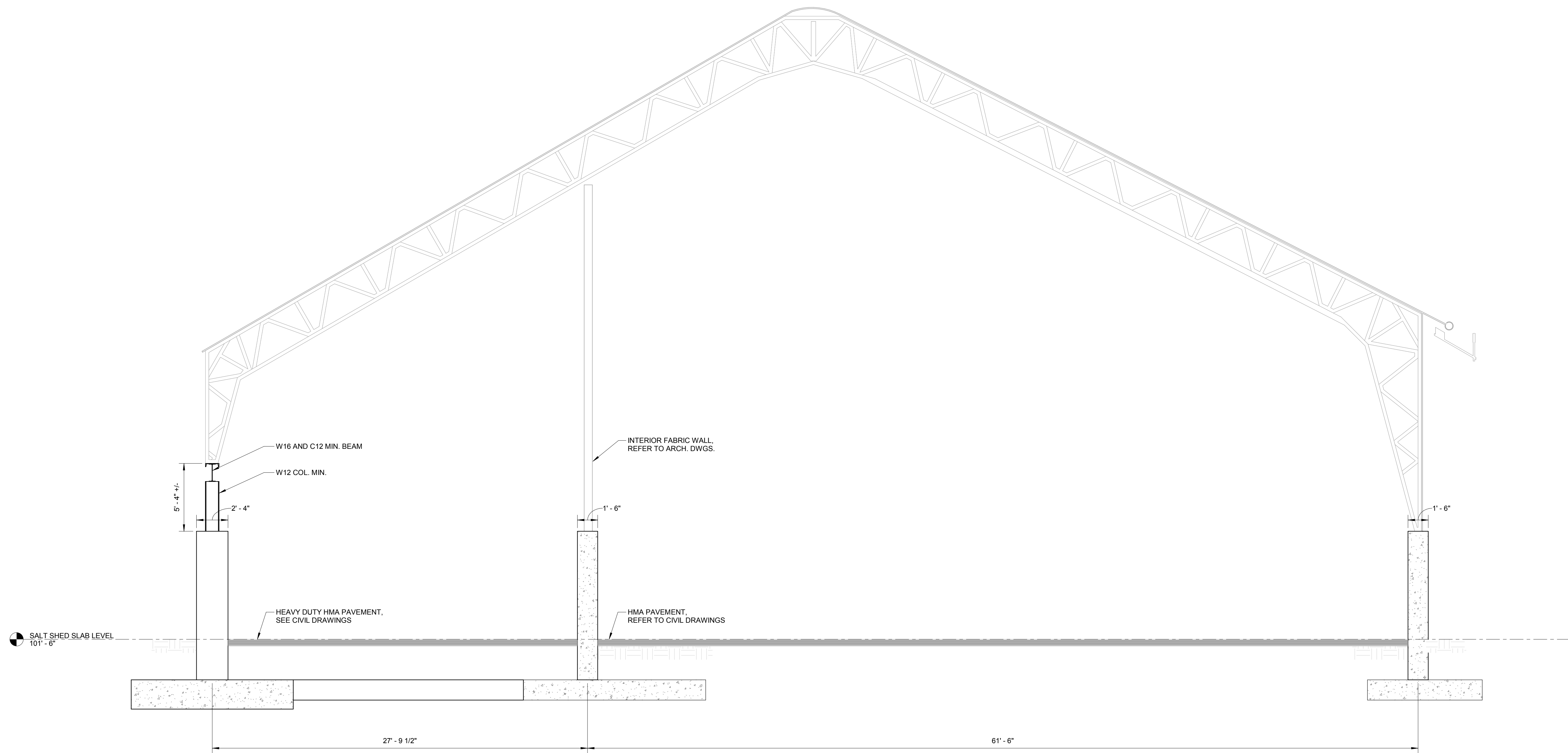
SALT SHED
GENERAL NOTES

DRAWING NO.:

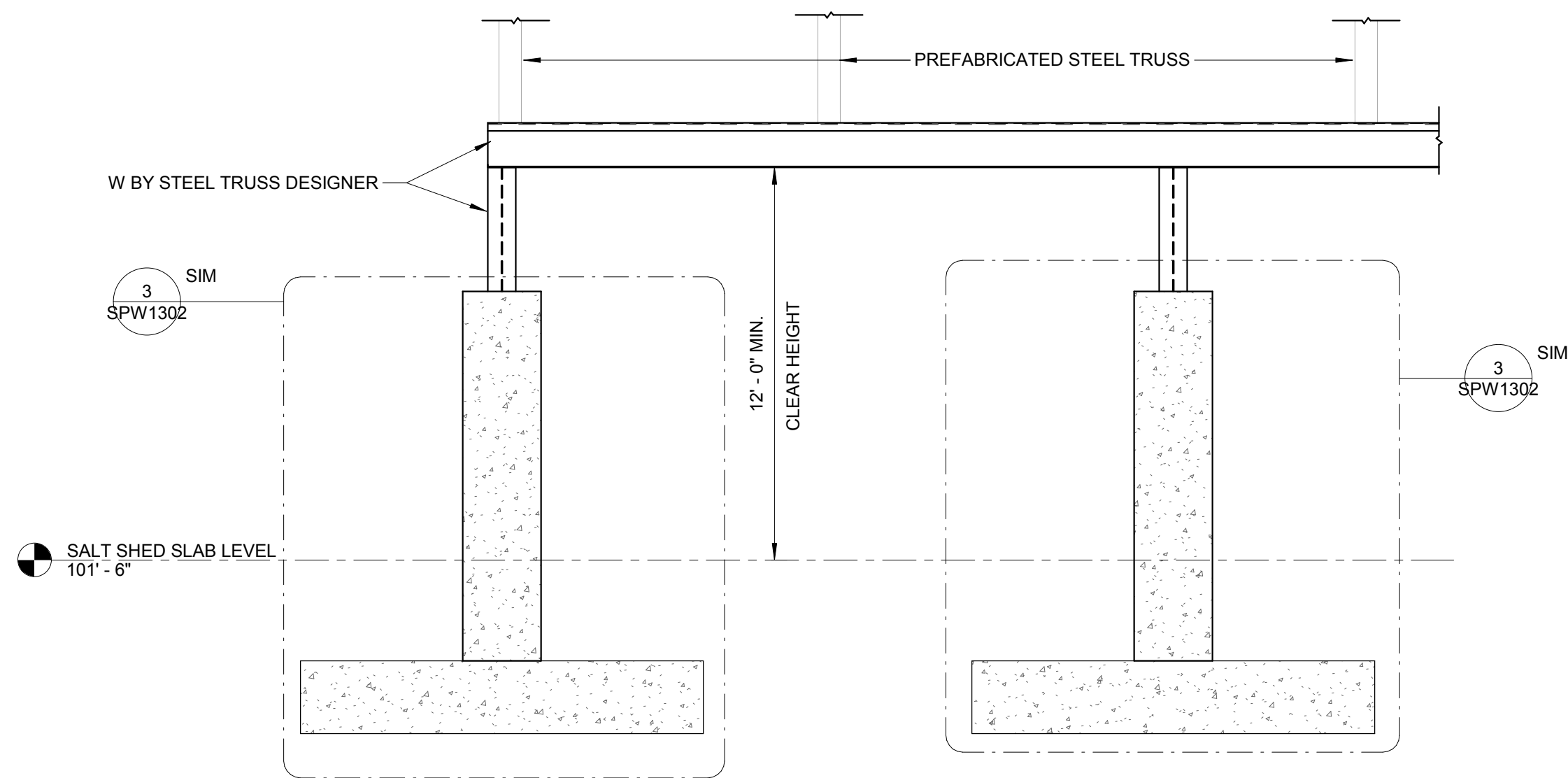
SPW1001



1 FOUNDATION PLAN
SCALE: 3/16" = 1'-0"



1 ELEVATION
SCALE: 1/4" = 1'-0"



2 CANOPY FRAMING ELEVATION
SCALE: 1/4" = 1'-0"

KAESTLE BOOS
associates, inc

416 Slater Road, New Britain, CT 06053
Phone: 860-229-0361 • Fax: 860-229-5303
Additional offices located in Massachusetts and Rhode Island
Email: kba@kba-architects.com • Web: www.kba-architects.com

Consultants:
Weston & Sampson

Weston & Sampson Engineers, Inc.
100 Foxborough Boulevard, Suite 250
Foxborough, MA 02035
978.532.1900 800 SAMPSON
www.westonandsampson.com

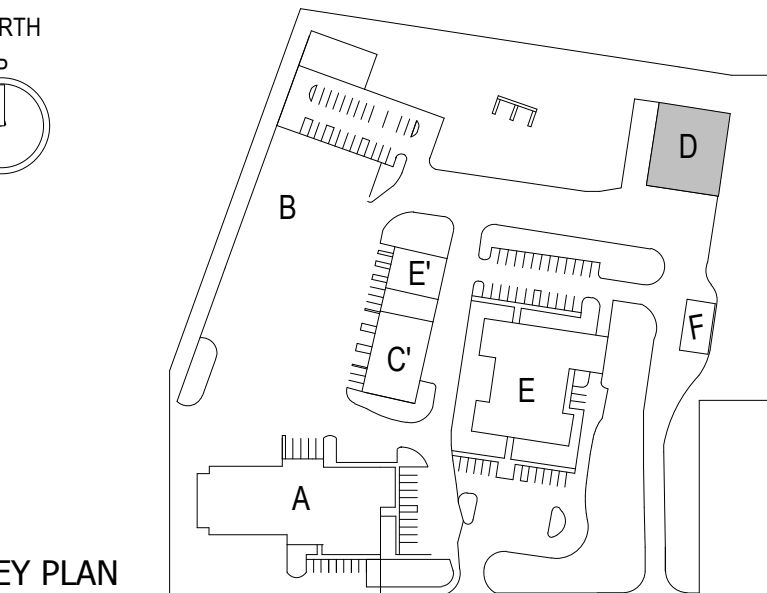
Consulting Engineering
Services, LLC
128 Carnegie Row, Ste. 104
Norwood MA 02062
617.261.7161
ceseng.com
CES #2021530.00



DATE	DESCRIPTION
10/16/2024	BID DOCUMENTS

DATE	DESCRIPTION
------	-------------

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS,
AND GENERAL NOTES SEE SHEETS APW011 AND
APW012



SCALE: AS NOTED



PHASE I - SALT
SHED, FUEL ISLAND
AND ASSOCIATED
SITE WORK

225 CENTRAL STREET,
ABINGTON, MA 02351

PROJECT NO.: ENG22-0465 DRAWN BY: ERL/AKR

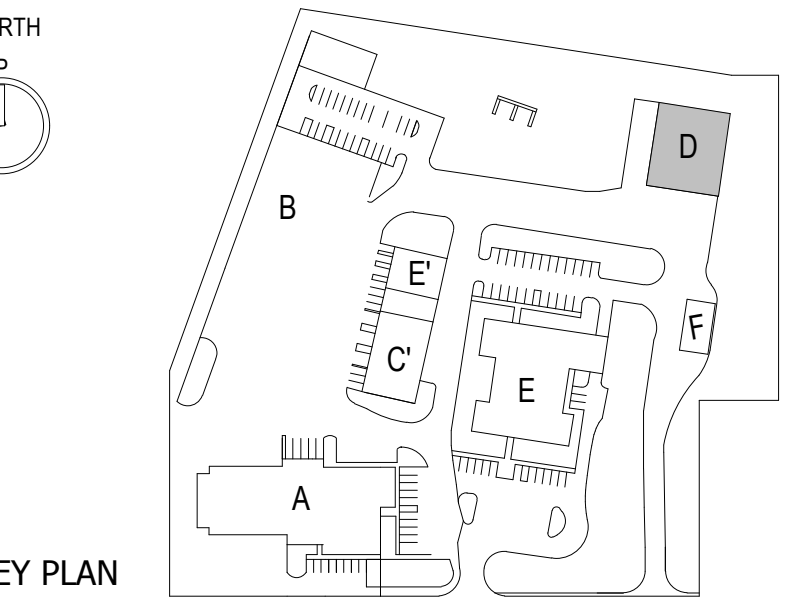
SALT SHED
ELEVATION

DRAWING NO.:
SPW1201

ISSUE DATE	
DATE	DESCRIPTION
11/16/2024	BID DOCUMENTS

REVISIONS	
DATE	DESCRIPTION

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS,
AND GENERAL NOTES SEE SHEETS APW011 AND
APW012



FILE: AS NOTED



**225 CENTRAL STREET,
ABINGTON, MA 02351**

PROJECT NO.: ENG22-0465 DRAWN BY: ERL/AKR

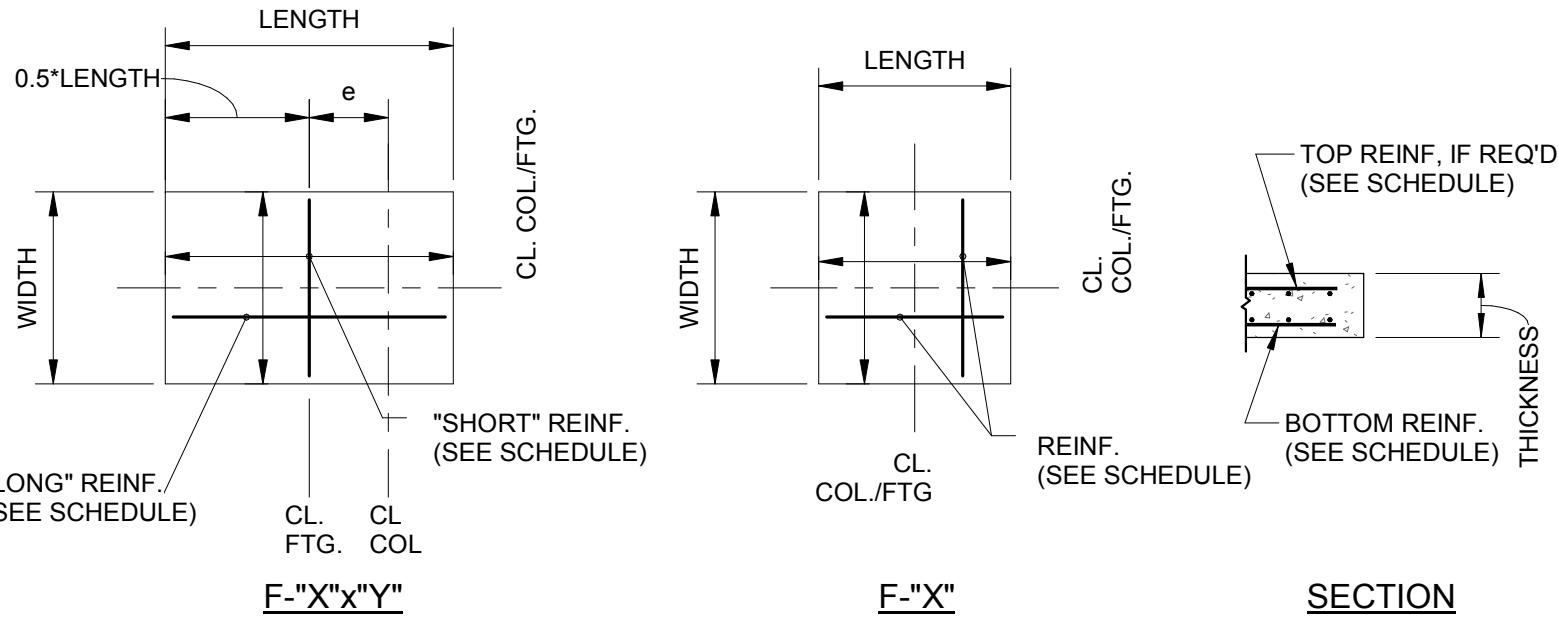
SPW1301



FOOTING SCHEDULE							
MARK	DIMENSIONS			REINFORCEMENT		TOP REINFORCEMENT	
	WIDTH [FT.]	LENGTH [FT.]	THICKNESS [IN.]	ECC. [IN.]	LONG WAY	SHORT WAY	
F12	12.0	12.0	26	0	(13) #8	(13) #8	#6 @ 12" O.C.

FOOTING NOTE(S):

- SQUARE FOOTINGS SHALL BE CENTERED BELOW COLUMNS U.N.O.
- RECTANGULAR FOOTINGS SHALL BE ORIENTED AS SHOWN IN PLAN, U.N.O.
- FOOTINGS SIZES ARE FOR BID PURPOSES ONLY. SIZES WILL BE VERIFIED UPON APPROVAL OF PREFABRICATED STEEL TRUSS SHOP DRAWINGS. FOOTINGS SHALL NOT BE CAST UNTIL METAL BUILDING SHOP DRAWINGS ARE APPROVED AND FOOTINGS SIZES ARE VERIFIED BY THE ENGINEER.
- WHERE FOOTINGS INTERSECT IN PLAN, FOOTING SHALL BE CAST INTEGRAL WITH THE REINFORCING AS SPECIFIED IN THE TABLE ABOVE.



1 FOOTING SCHEDULE

SCALE: 1/4" = 1'-0"

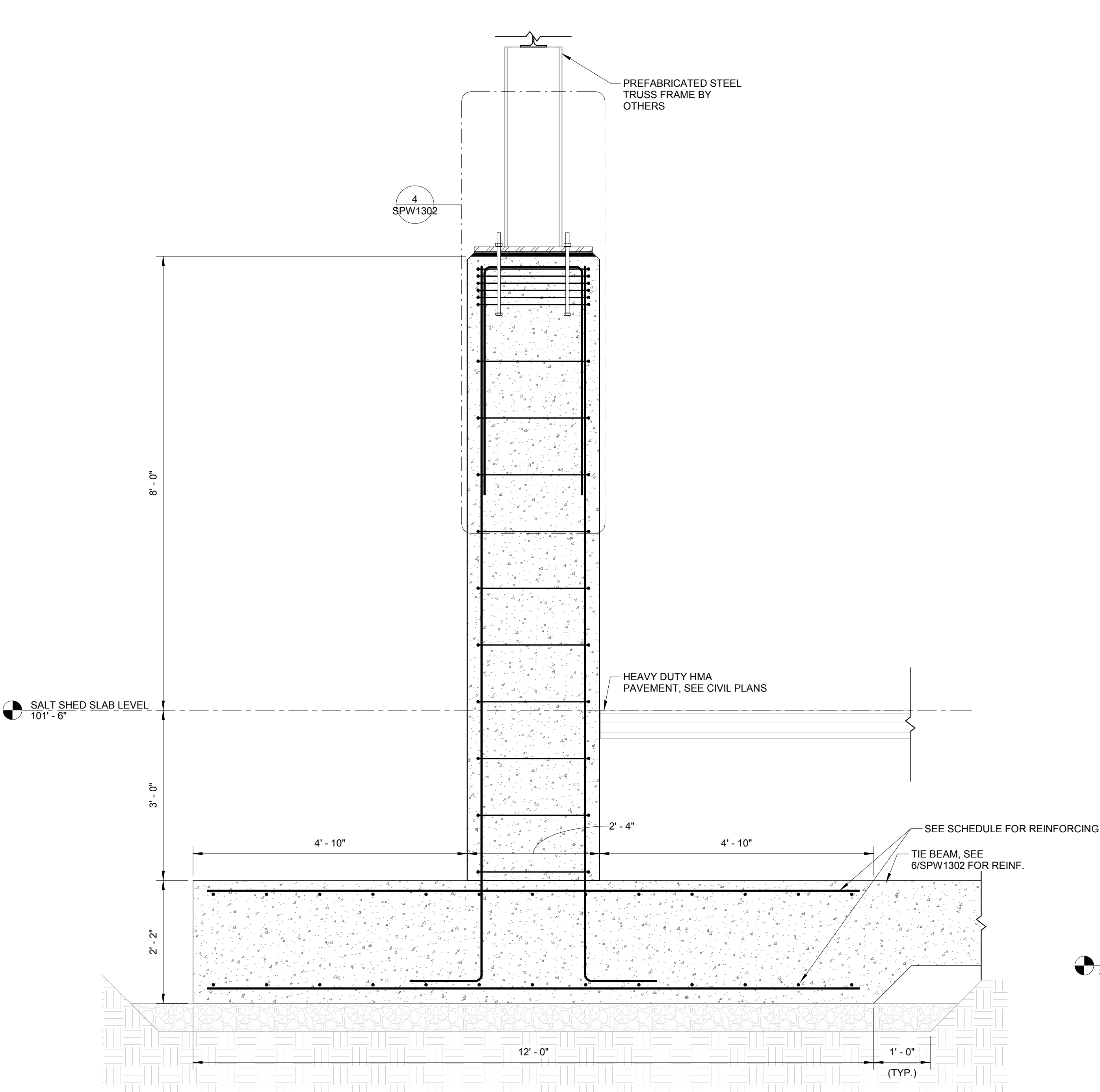
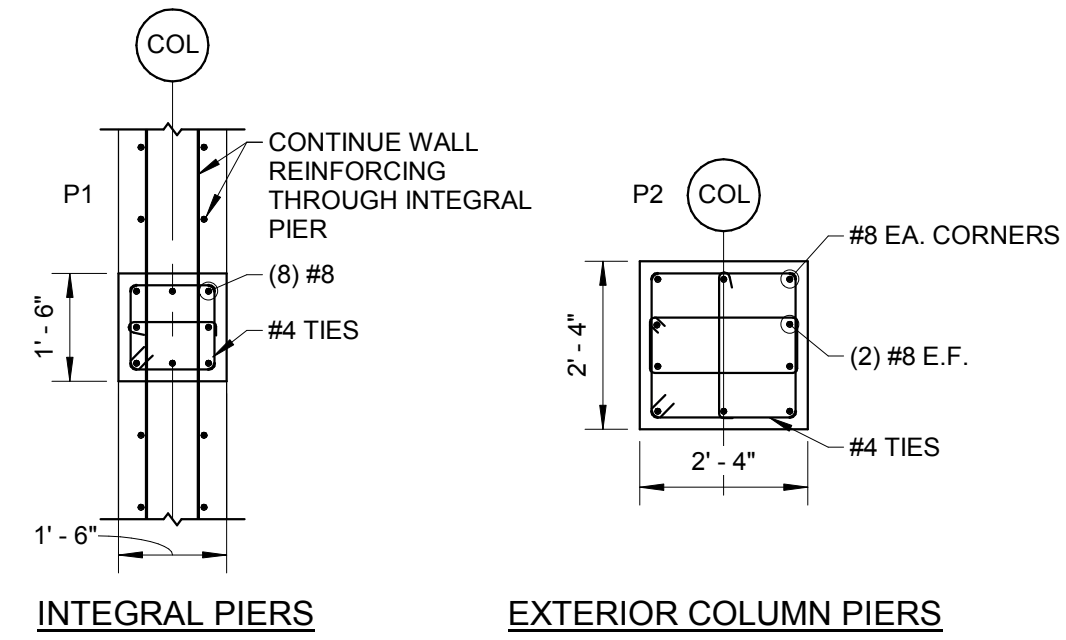
PIER SCHEDULE						
MARK	DIMENSIONS		T.O. PIER ELEVATION	REINFORCEMENT		COMMENTS
	WIDTH [IN.]	LENGTH [IN.]		VERTICAL	TIES	
P1	18	18	+8'-0"	(8) #8	#4	(6) #4 TIES IN TOP 12"
P2	28	28	+8'-0"	(10) #8	#4	(6) #4 TIES IN TOP 12"

NOTE(S):

- FINAL LOCATIONS OF PIERS SHALL BE COORDINATED WITH APPROVED PREFABRICATED STEEL TRUSS SHOP DRAWINGS. PIERS SHALL BE CENTERED BELOW COLUMN SECTION AT THE BASE PLATE LEVEL.
- PREFABRICATED STEEL TRUSS BASE PLATES SHALL BE DESIGNED TO FIT ON AND WITHIN PIER DIMENSIONS SHOWN ABOVE. ANY PIER MODIFICATIONS WILL BE AT COST OF THE CONTRACTOR. THE CONTRACTOR SHALL IDENTIFY ANY PIERS REQUIRING MODIFICATIONS AND SUBMIT TO THE ENGINEER FOR REVIEW.
- A MINIMUM OF (4) LONGITUDINAL REINFORCING BARS IN THE PIER SHALL HAVE A STANDARD HOOK AT THE TOP AND BOTTOM.
- TIES SHALL BE #4 @ 12" VERTICALLY WITH 6 TIES LOCATED WITHIN THE TOP 12" ON THE PIER, UNLESS OTHERWISE NOTED.
- CENTER PIER BENEATH BASEPLATE, PIER REINFORCING MUST BE CENTERED UNDER BASEPLATE AND MEET COVER REQUIREMENTS ON SPW1001.

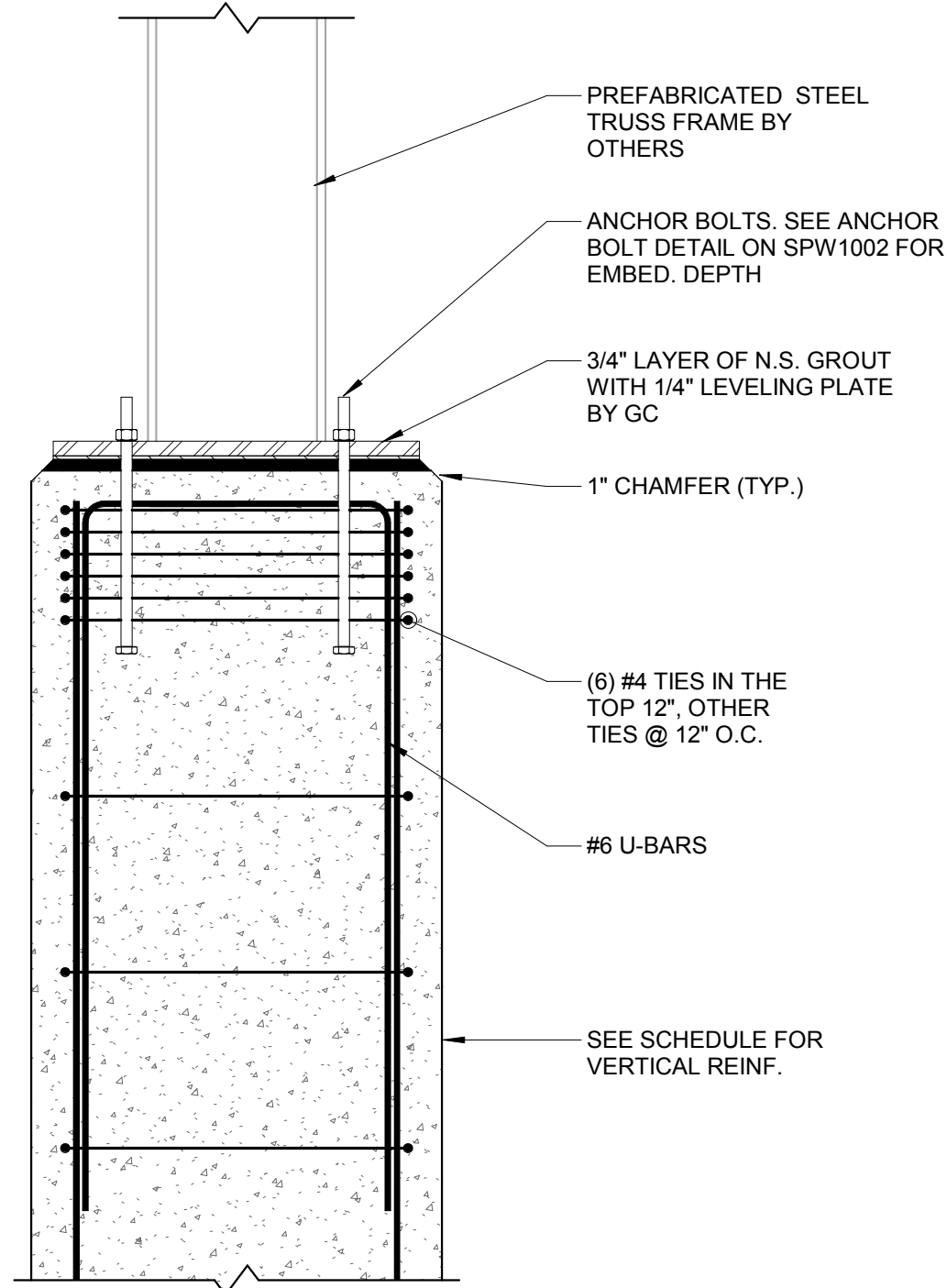
2 PIER DETAIL

SCALE: 3/8" = 1'-0"



3 SECTION THROUGH CANOPY PIER

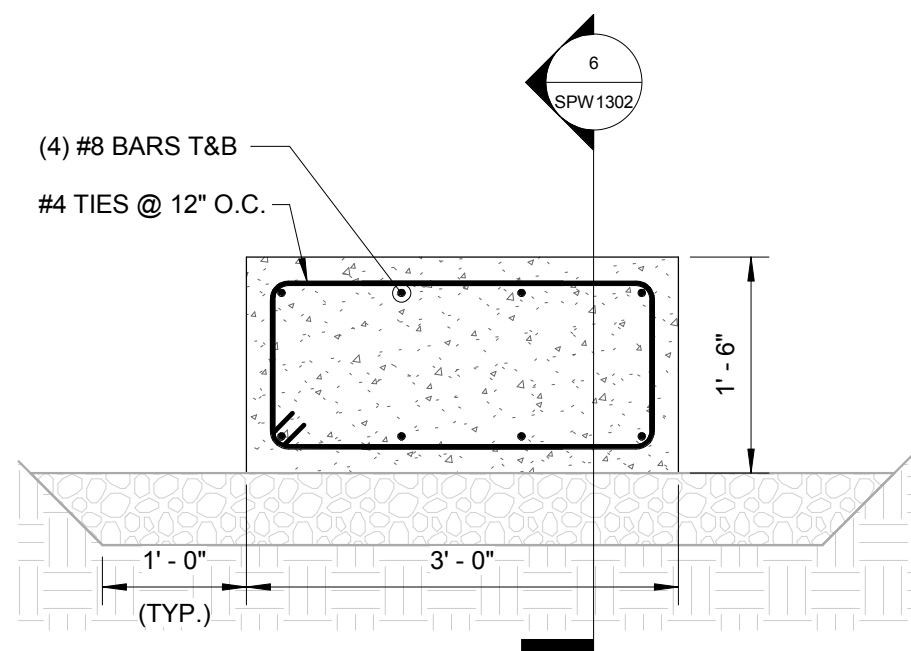
SCALE: 3/4" = 1'-0"



- NOTES:
- TYPICAL AT TOP OF ALL PIERS, INCLUDING INTEGRAL PIERS.
 - CHAMFER FROM EDGE OF BASE PLATE, COORD. WITH SHOP DRAWINGS.

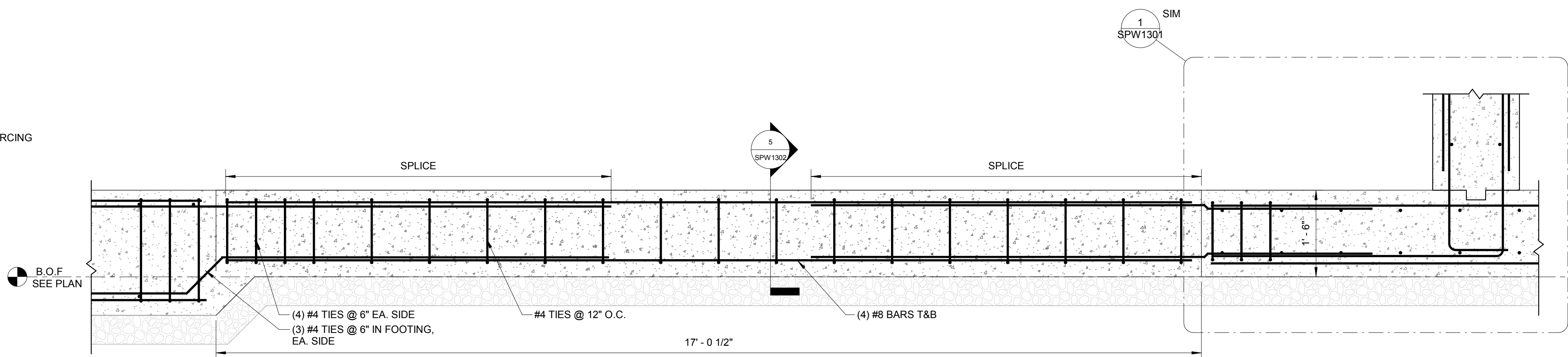
4 PIER REINFORCING

SCALE: 1" = 1'-0"



5 SECTION THROUGH TIE BEAM

SCALE: 3/4" = 1'-0"



6 TIE BEAM ELEVATION

SCALE: 3/4" = 1'-0"

KAESTLE BOOS
associates, inc

416 Slater Road, New Britain, CT 06053
Phone: 860-229-0361 A Fax: 860-229-5303
Additional offices located in Massachusetts and Rhode Island
Email: kba@kba-architects.com A Web: www.kba-architects.com

Consultants:

Weston & Sampson

Weston & Sampson Engineers, Inc.
100 Foxborough Boulevard, Suite 250
Foxborough, MA 02035
978.532.1900 800 SAMPSON
www.westonandsampson.com

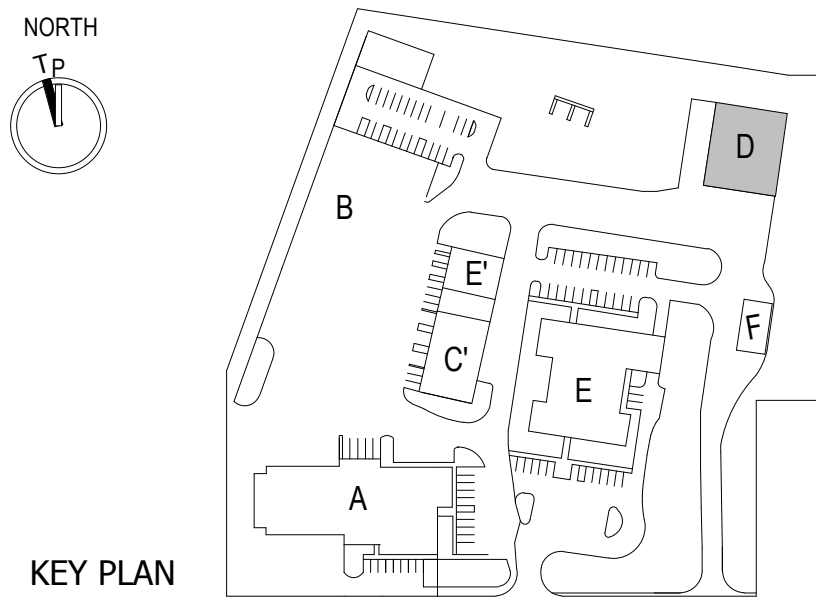
Consulting Engineering
Services, LLC
128 Carnegie Row, Ste. 104
Norwood MA 02062
617.261.7161
ceseng.com
CES #2021530.00



ISSUE DATE
DESCRIPTION
10/16/2024
BID DOCUMENTS

REVISIONS
DATE
DESCRIPTION

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS,
AND GENERAL NOTES SEE SHEETS APW011 AND
APW012



SCALE: AS NOTED



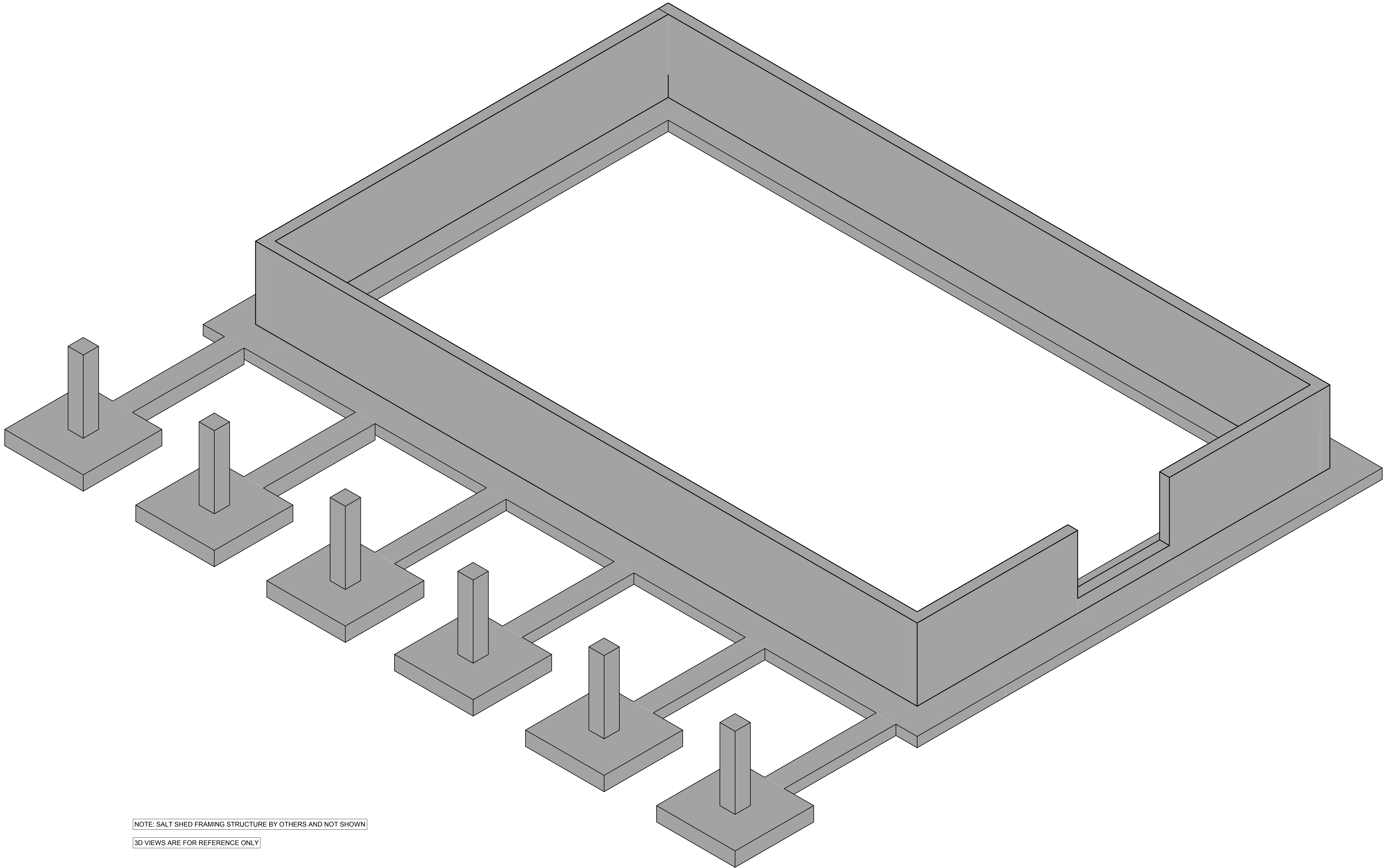
PHASE I - SALT
SHED, FUEL ISLAND
AND ASSOCIATED
SITE WORK

225 CENTRAL STREET,
ABINGTON, MA 02351

PROJECT NO.: ENG22-0465 DRAWN BY: ERL/AKR

SALT SHED
FOUNDATION
SECTIONS &
DETAILS II

DRAWING NO.:
SPW1302



NOTE: SALT SHED FRAMING STRUCTURE BY OTHERS AND NOT SHOWN
3D VIEWS ARE FOR REFERENCE ONLY

1 3D VIEW
SCALE:

KAESTLE BOOS
associates, inc

416 Slater Road, New Britain, CT 06053
Phone: 860-229-0361 ▲ Fax: 860-229-5303
Additional offices located in Massachusetts and Rhode Island
Email: kba@kba-architects.com ▲ Web: www.kba-architects.com

Consultants:
Weston & Sampson

Weston & Sampson Engineers, Inc.
100 Foxborough Boulevard, Suite 250
Foxborough, MA 02035
978.532.1900 800 SAMPSON
www.westonandsampson.com

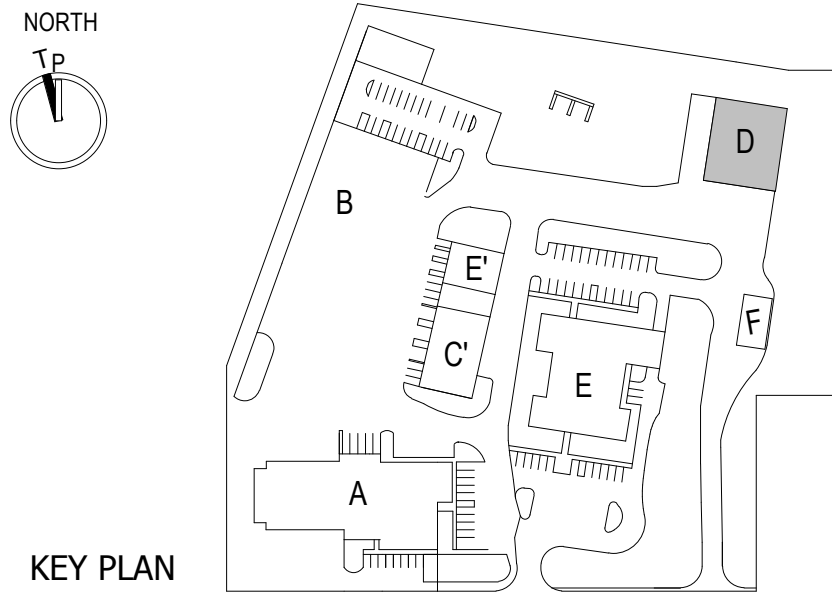
**Consulting Engineering
Services, LLC**
128 Carnegie Row, Ste. 104
Norwood MA 02062
617.261.7161
ceseng.com
CES #2021530.00



DATE	DESCRIPTION
10/16/2024	BID DOCUMENTS

DATE	DESCRIPTION
------	-------------

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS,
AND GENERAL NOTES SEE SHEETS APW011 AND
APW012



SCALE: AS NOTED



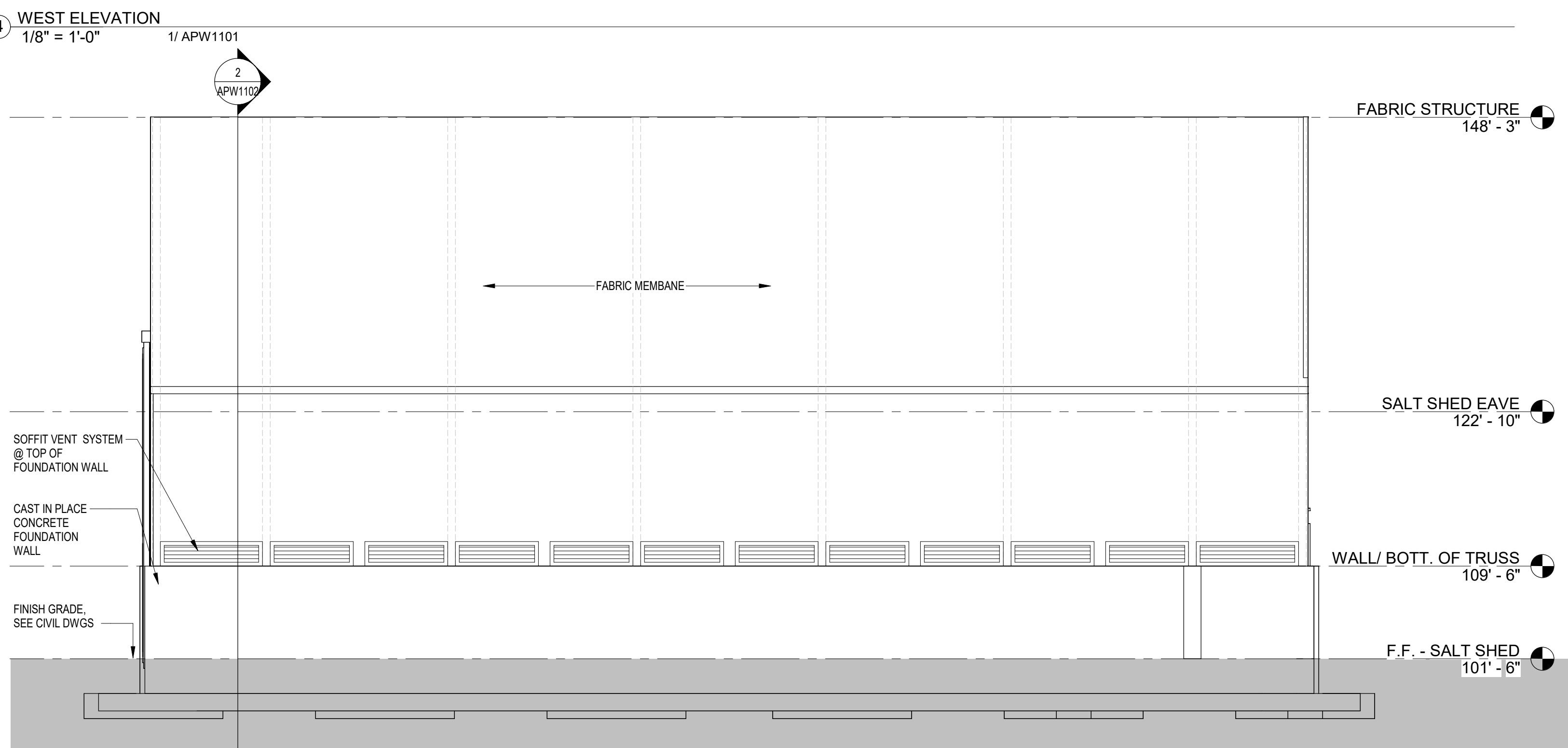
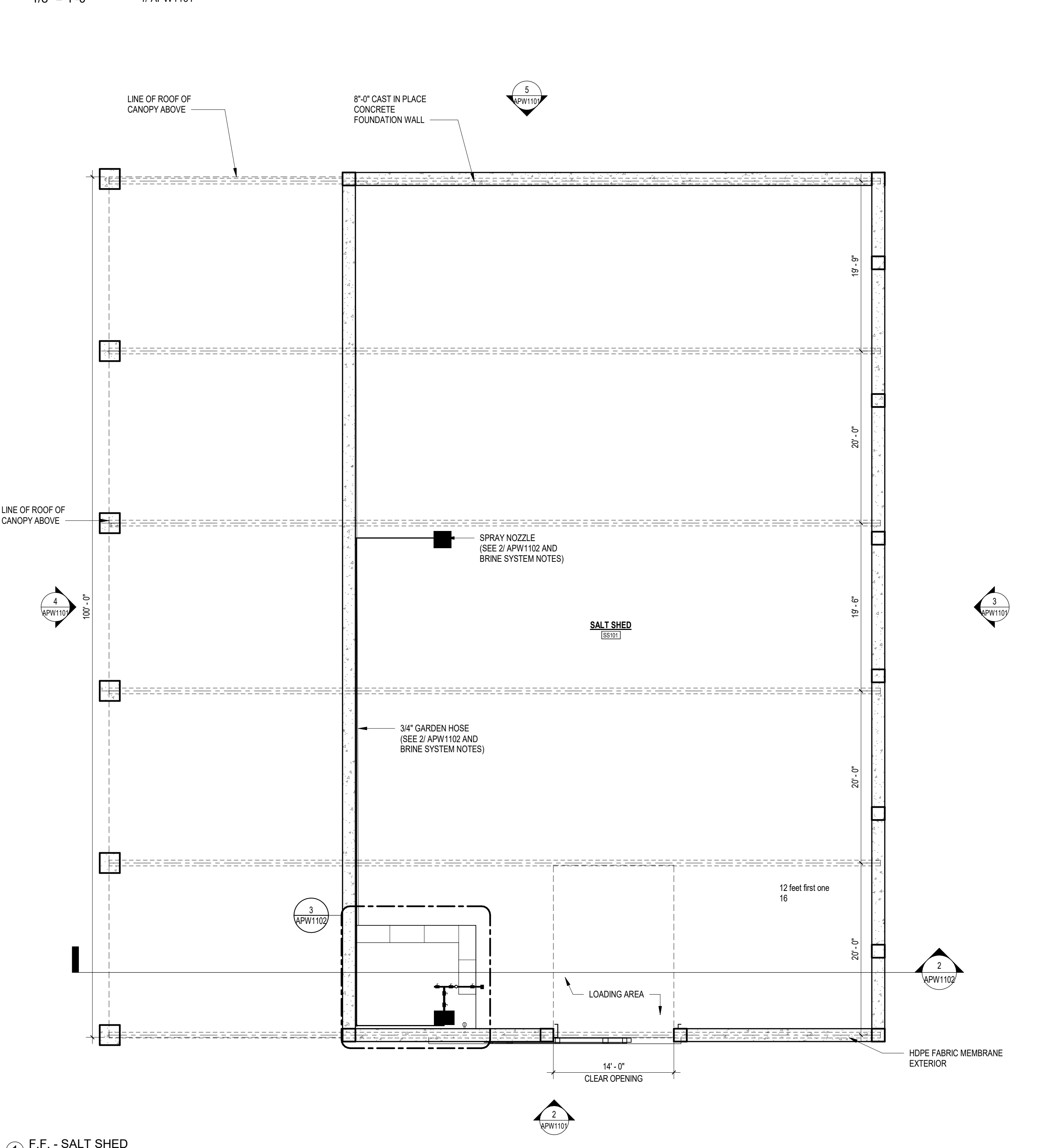
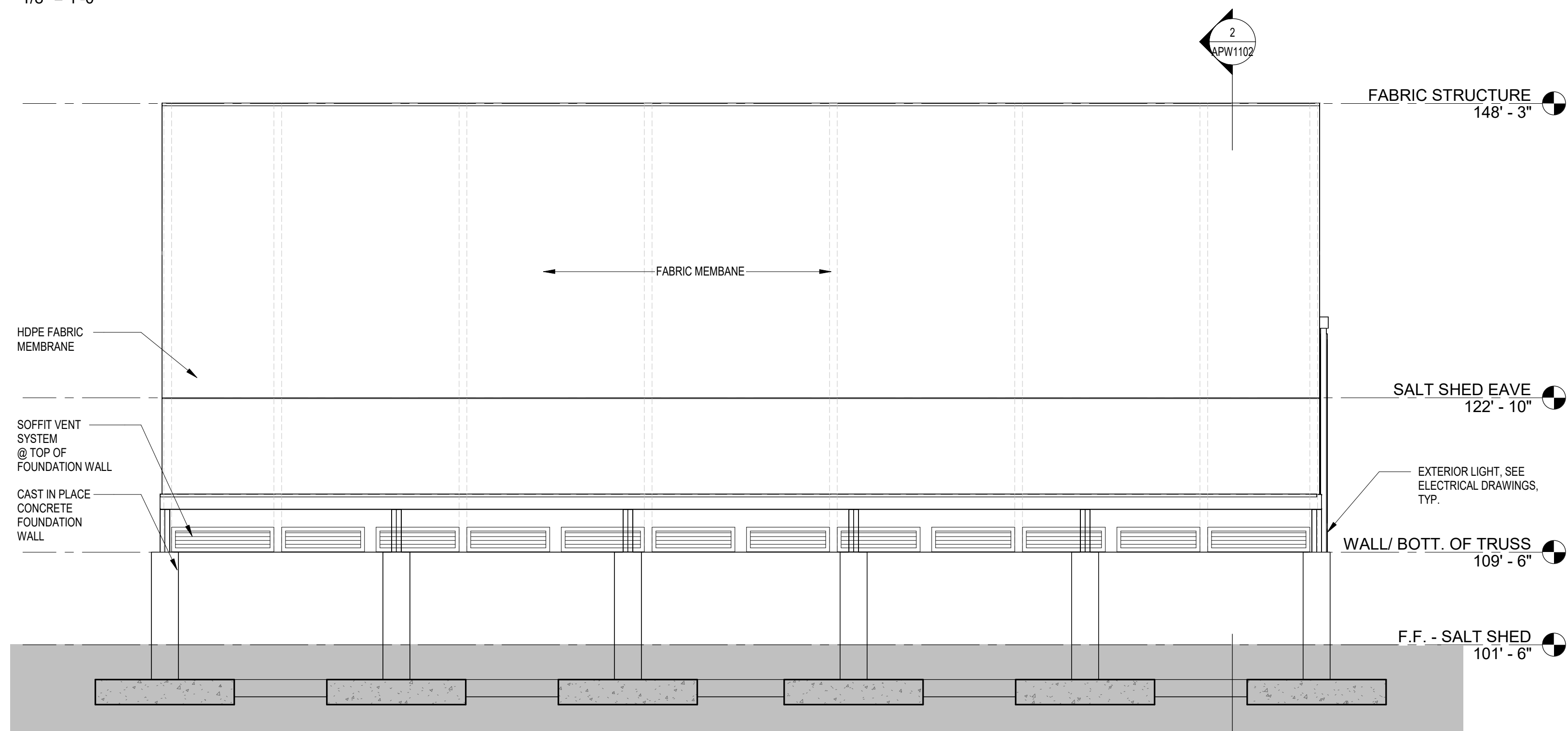
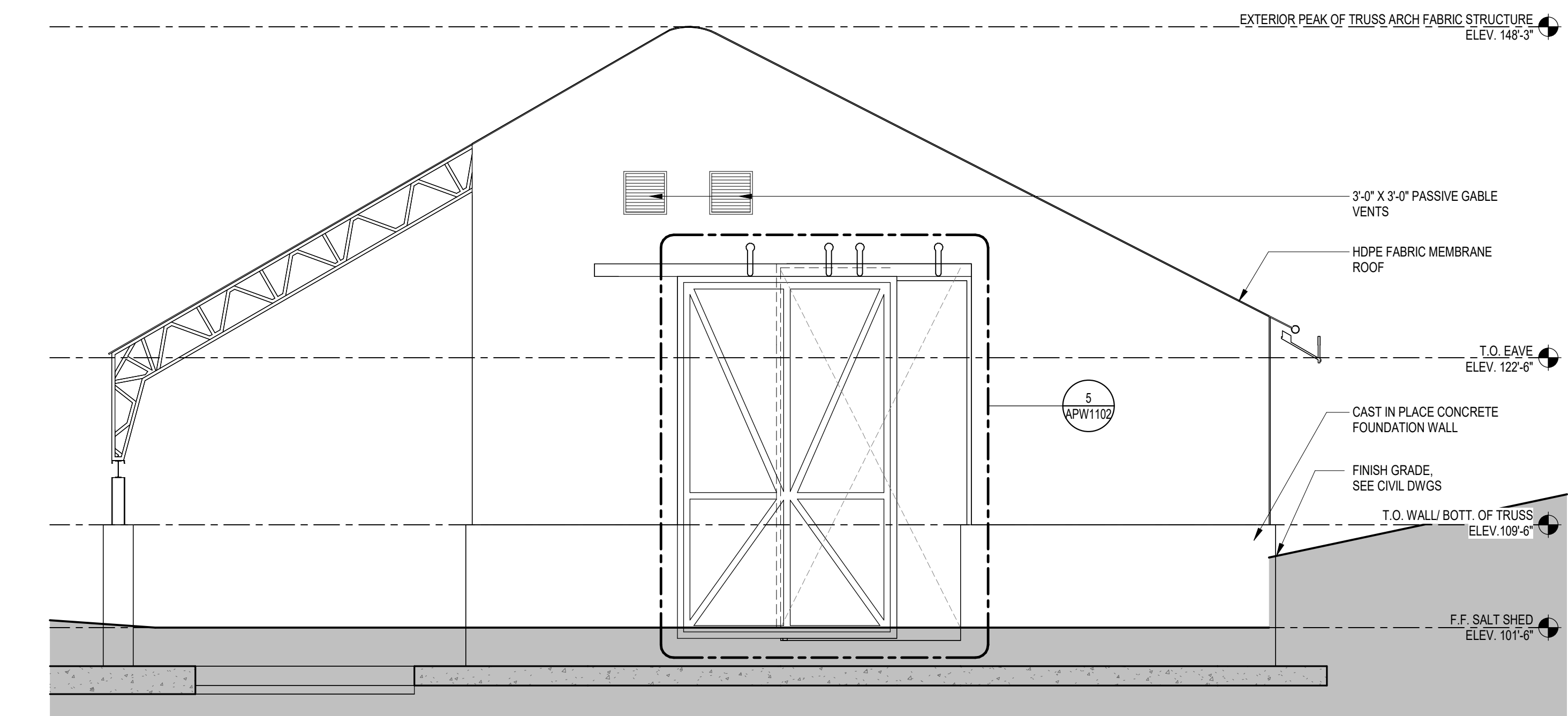
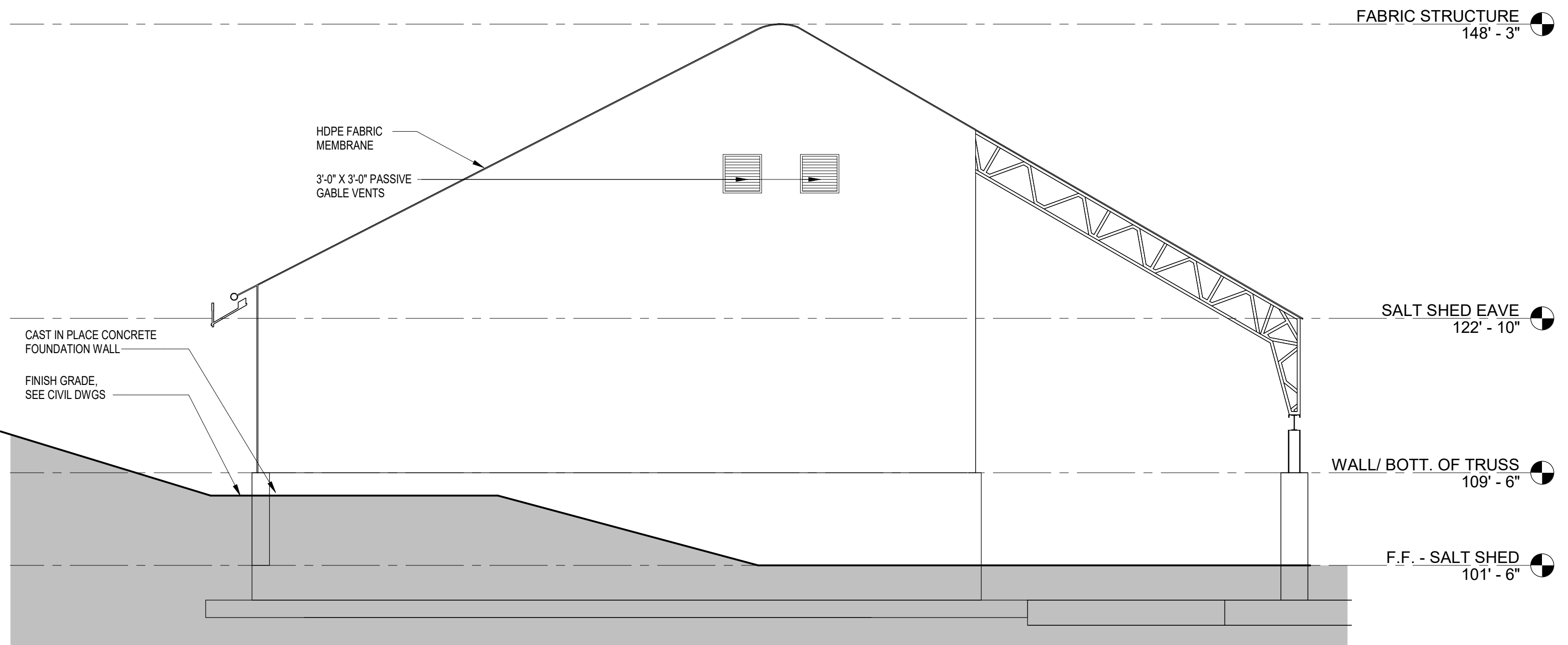
**PHASE I - SALT
SHED, FUEL ISLAND
AND ASSOCIATED
SITE WORK**

**225 CENTRAL STREET,
ABINGTON, MA 02351**

PROJECT NO.: ENG22-0465 DRAWN BY: ERL/AKR

**SALT SHED 3D
VIEWS**

DRAWING NO.:
SPW1901



GENERAL SALT SHED NOTES:

1. COLUMN LINE SPACING SHOWN FOR NEW TRUSS ARCH FRAMING AND WOOD SIDE WALL IS DIAGRAMMATIC ONLY. CONTRACTOR IS RESPONSIBLE FOR DESIGNING THE STRUCTURE TO MEET ALL CURRENT CODES. FINAL QUANTITY OF TRUSS ARCH FRAMES AND COLUMN LINE SPACING SHALL BE DETERMINED BY THE SALT SHED MANUFACTURER. FINAL COLUMN LINE LOCATIONS ARE SUBJECT TO ENGINEER REVIEW. THE ADDITION OR DELETION OF TRUSS ARCH FRAMES BASED ON THE FINAL DESIGN BY THE BUILDING MANUFACTURER SHALL NOT BE CAUSE FOR A CHANGE IN THE CONTRACTOR PRICE.
2. CONTRACTOR SHALL SUBMIT DETAILED CONNECTION DRAWINGS FOR THE MEMBRANE AND WOOD SIDE WALL COVERED FRAME STRUCTURE AND CAST-IN-PLACE CONCRETE WALLS STAMPED BY A LICENSED MASSACHUSETTS STRUCTURAL ENGINEER.
3. THE PT PLYWOOD PROTECTION WALL (INSIDE FACE OF SIDE AND BACK WALLS) SHALL CONSIST OF 3/4" PT PLYWOOD MOUNTED TO 1/2" STRAPPING AT 18" O.C. INSTALLED VERTICALLY FASTENED TO THE CONCRETE BLOCKS WITH NON-CORROSIVE FASTENERS (STAINLESS STEEL). PLYWOOD SHALL STOP 12" FORM THE FLOOR TO ALLOW SALT TO FALL OUT FROM BEHIND THE WALL.

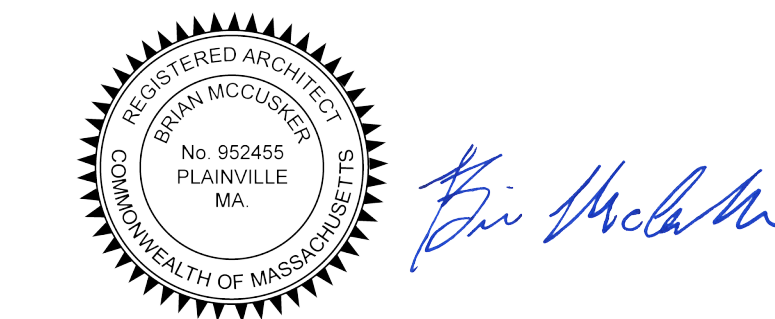
KAESTLE BOOS
associates, inc

416 Slater Road, New Britain, CT 06053
Phone: 860-229-0361 A Fax: 860-229-5303
Additional offices located in Massachusetts and Rhode Island
Email: kba@kba-architects.com A Web: www.kba-architects.com

Consultants:
Weston & Sampson

Weston & Sampson Engineers, Inc.
100 Foxborough Boulevard, Suite 250
Foxborough, MA 02035
978.532.1900 800 SAMPSON
www.westonandsampson.com

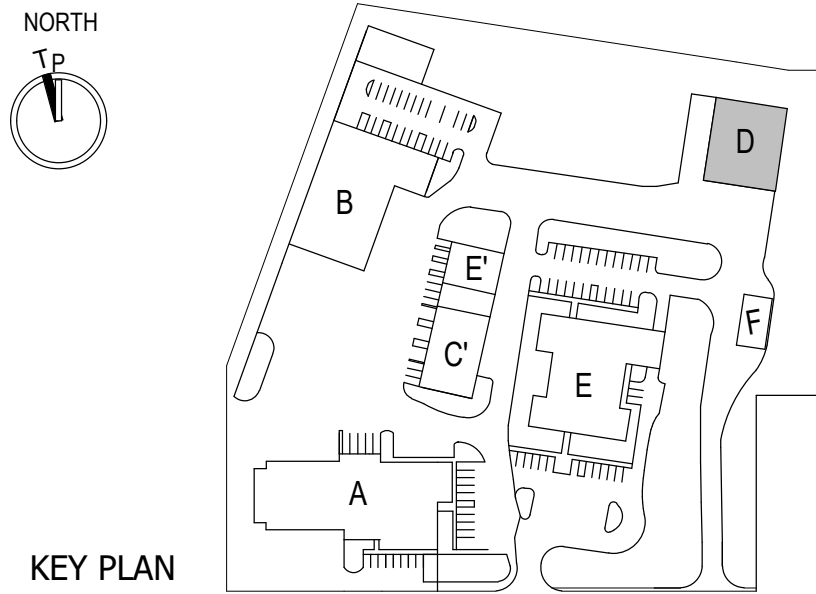
Consulting Engineering
Services, LLC
128 Carnegie Row, Ste. 104
Norwood MA 02062
617.261.7161
ceseng.com
CES #2021530.00



ISSUE DATE
DATE 10/16/2024
DESCRIPTION
BID DOCUMENTS

REVISIONS
DATE
DESCRIPTION

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS,
AND GENERAL NOTES SEE SHEETS APW011 AND
APW012



SCALE: AS NOTED



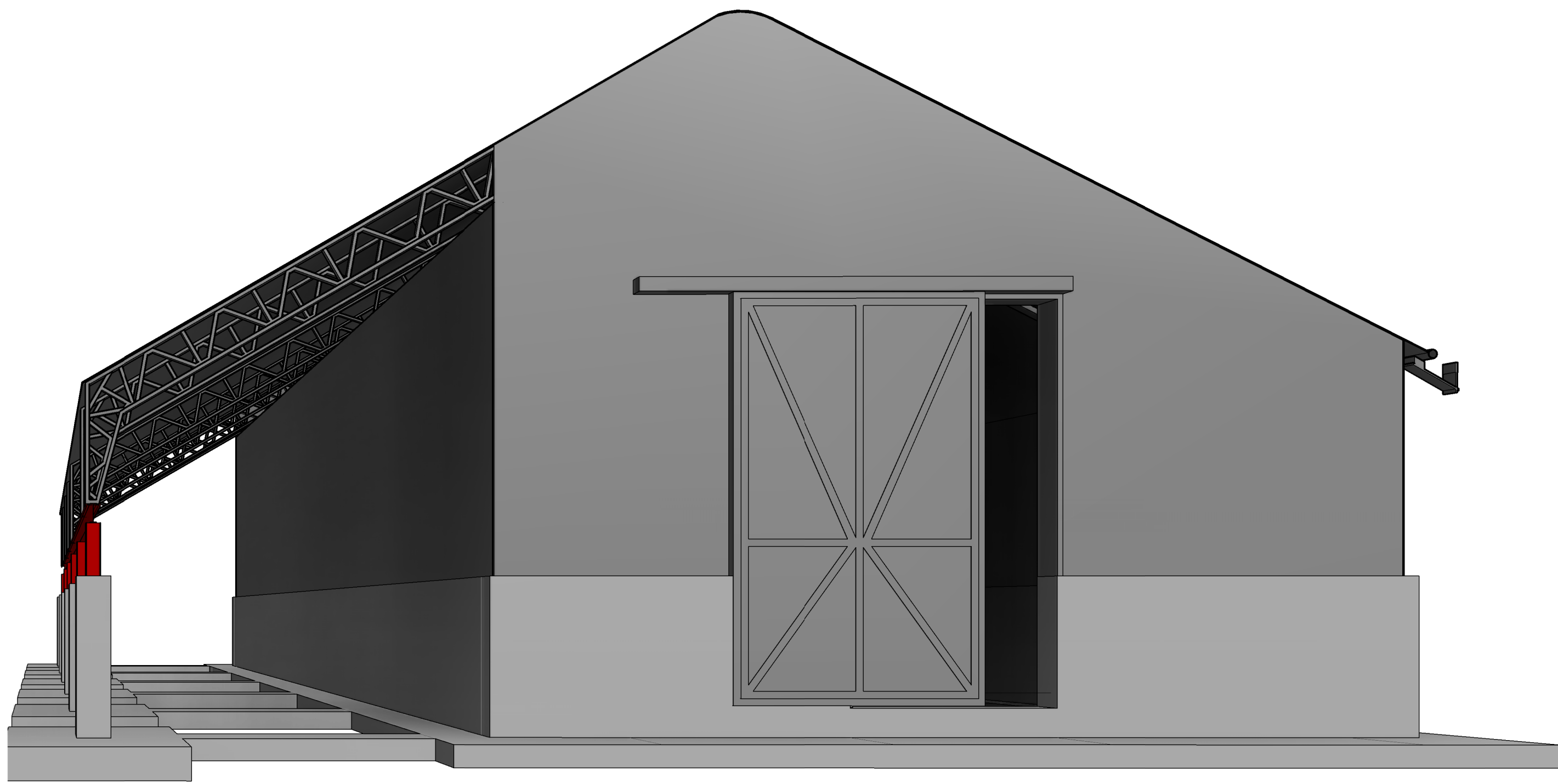
PHASE I - SALT
SHED, FUEL ISLAND
AND ASSOCIATED
SITE WORK

225 CENTRAL STREET,
ABINGTON, MA 02351

PROJECT NO.: ENG22-0465
DRAWN BY: FS

OVERALL SALT
SHED FLOOR PLAN
& ELEVATIONS

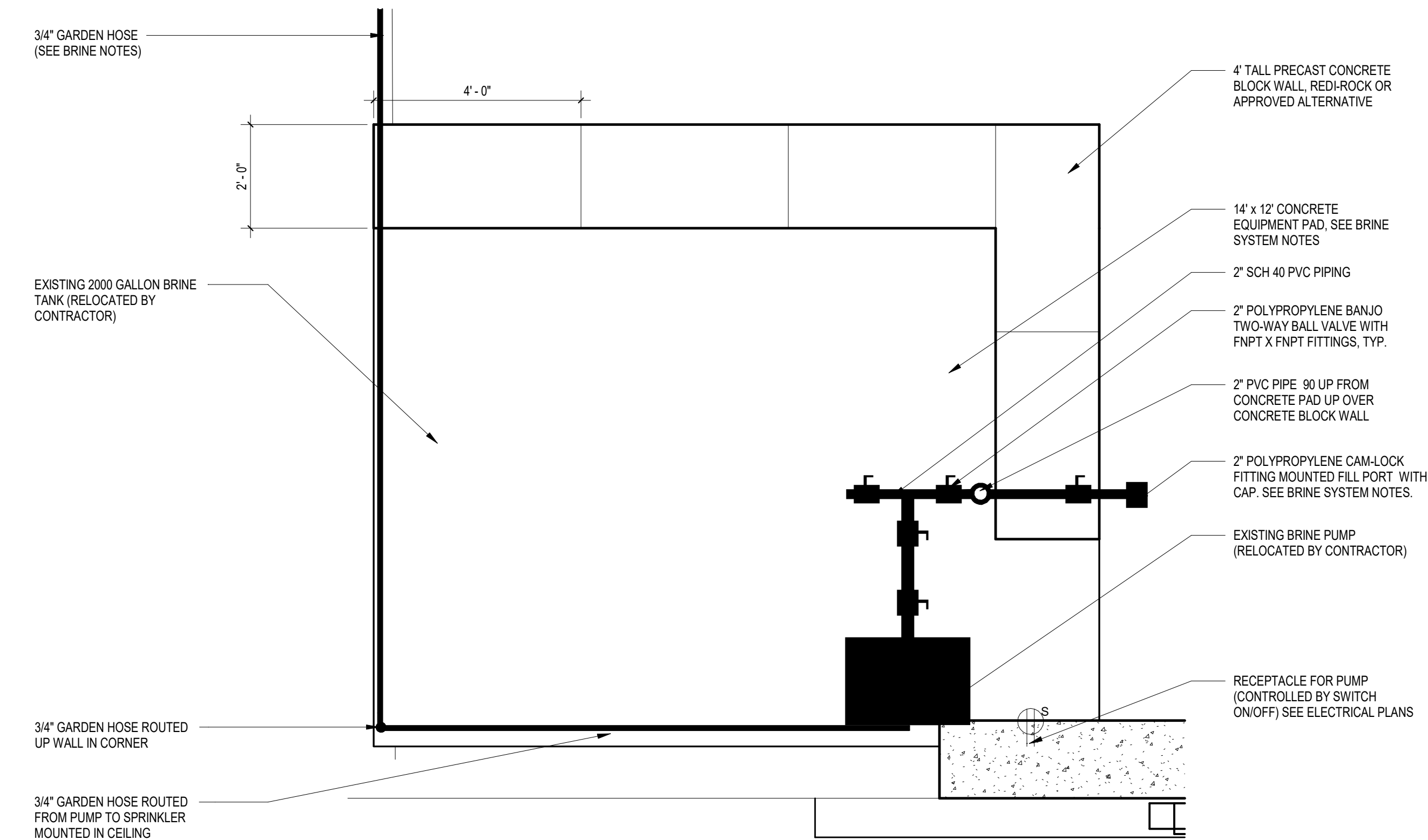
DRAWING NO.:
APW1101



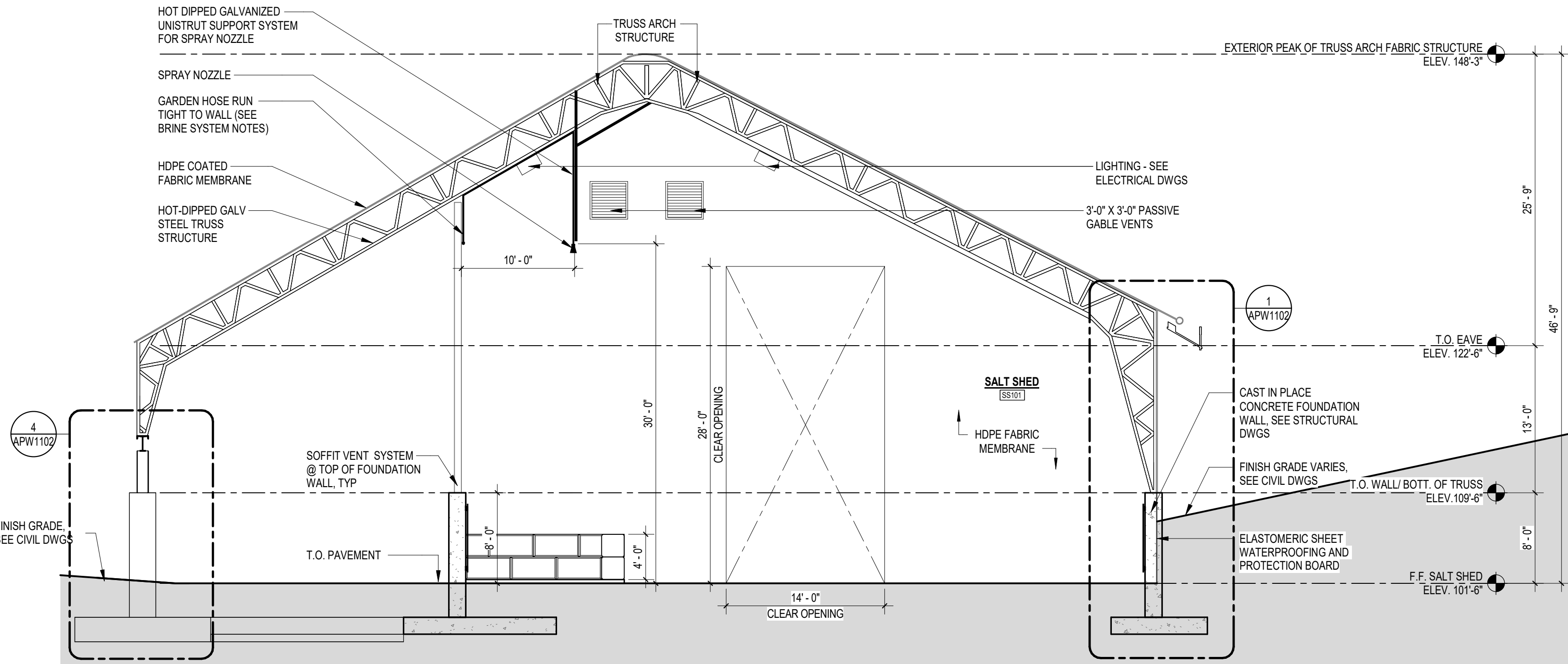
7 PERSPECTIVE I



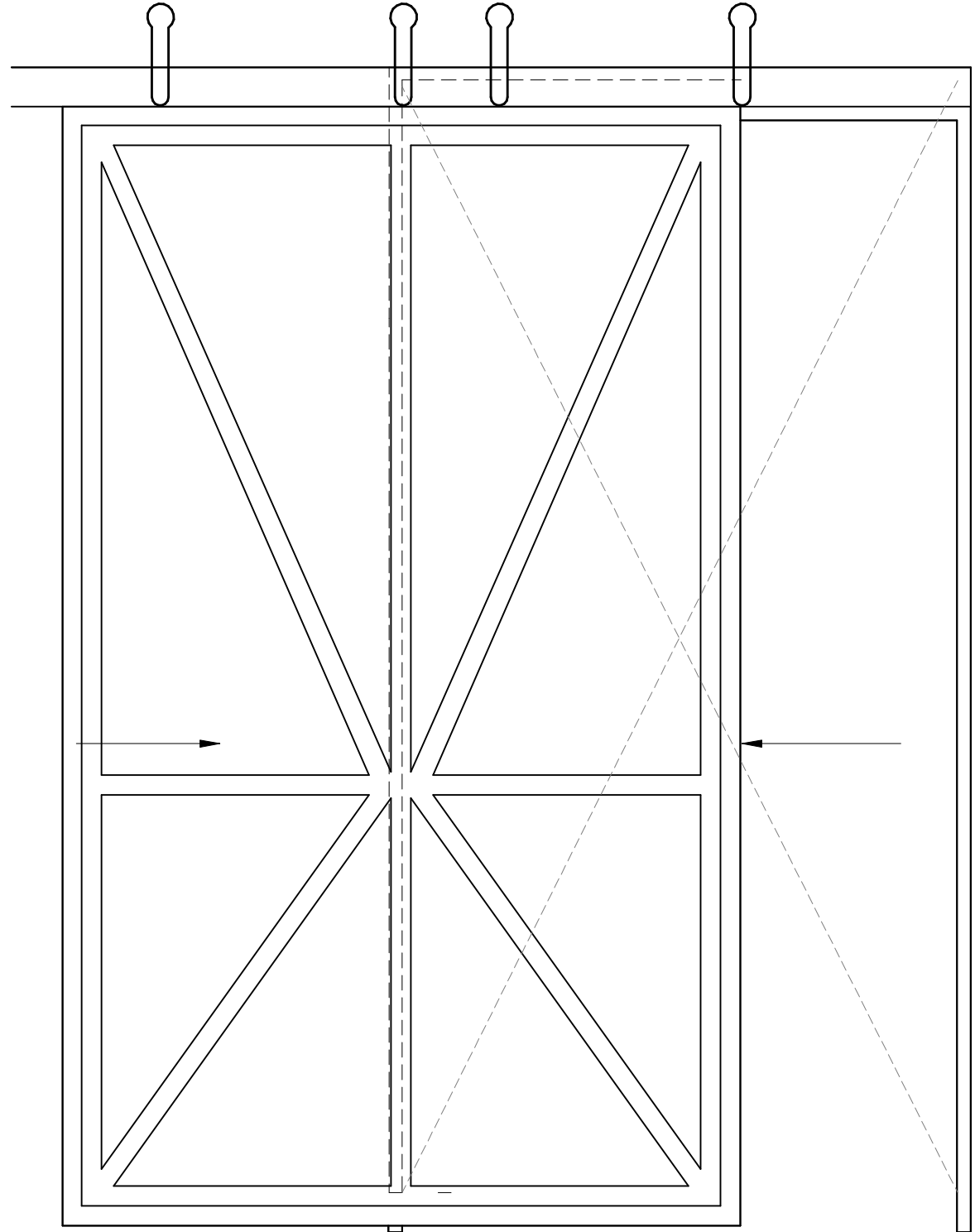
6 PERSPECTIVE II



3 ENLARGED PLAN - BRINE SYSTEM
1/2" = 1'-0"

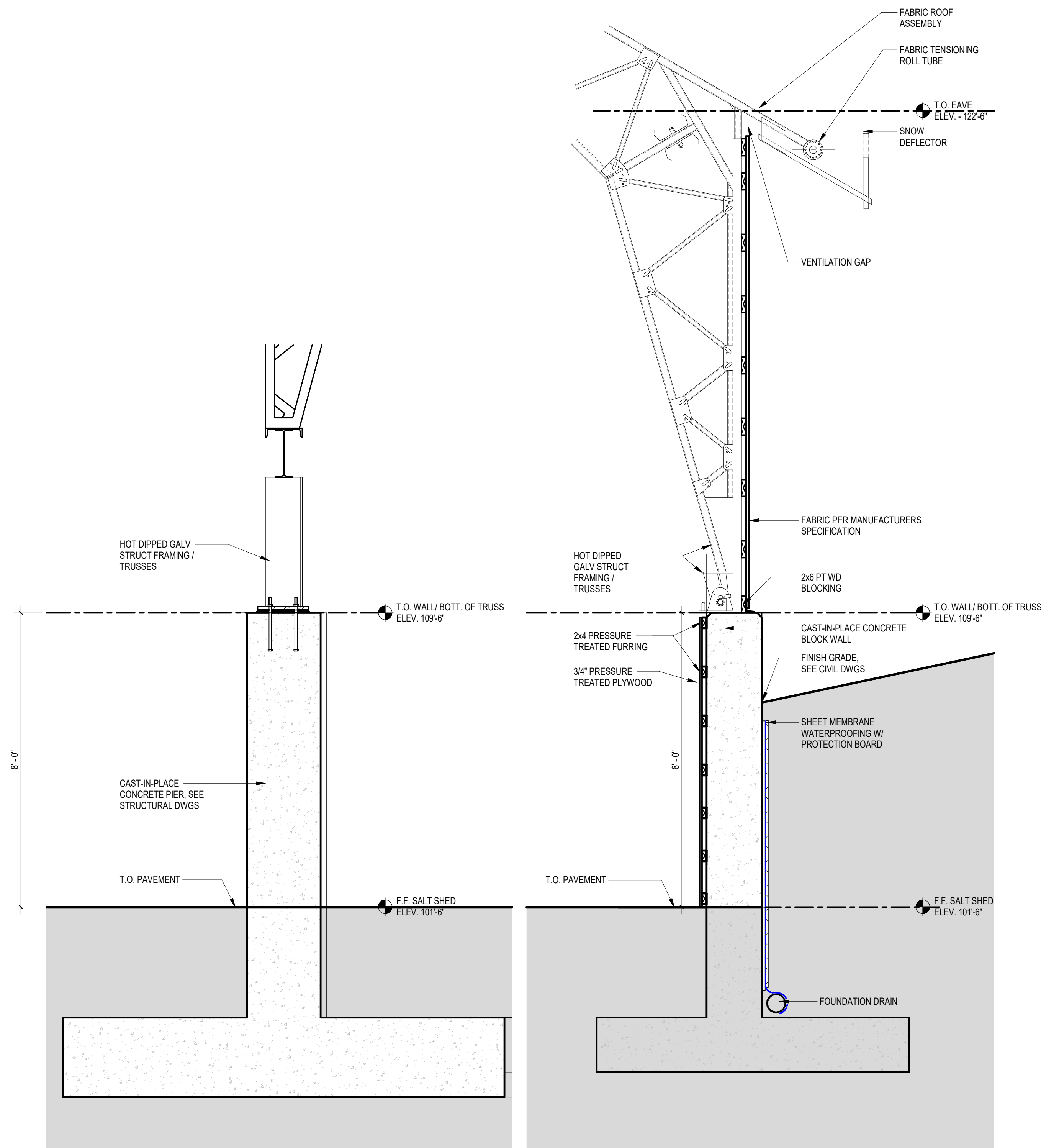


2 SALT SHED SECTION
1/8" = 1'-0"



5 DOOR
1/4" = 1'-0"

DOOR SCHEDULE									
DOOR #	ROOM NAME	TYPE	DOORS		WIDTH	HEIGHT	FRAMES		HOWR SET
			FINISH	MATERIAL			MATERIAL	FINISH	
SS103					14'-0"	28'-0"			



4 FABRIC ROOF @ CANOPY
1/2" = 1'-0"

1 FABRIC ROOF AND SIDING WALL SECTION
1/2" = 1'-0"

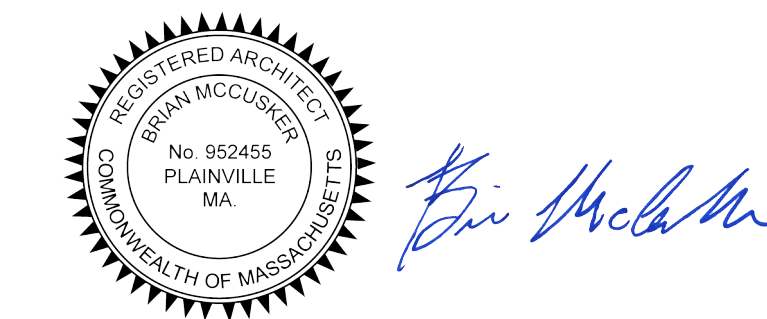
KAESTLE BOOS
associates, inc

416 Slater Road, New Britain, CT 06053
Phone: 860-229-0361 • Fax: 860-229-5303
Additional offices located in Massachusetts and Rhode Island
Email: kba@kba-architects.com • Web: www.kba-architects.com

Consultants:
Weston & Sampson

Weston & Sampson Engineers, Inc.
100 Foxborough Boulevard, Suite 250
Foxborough, MA 02035
978.532.1900
www.westonandsampson.com

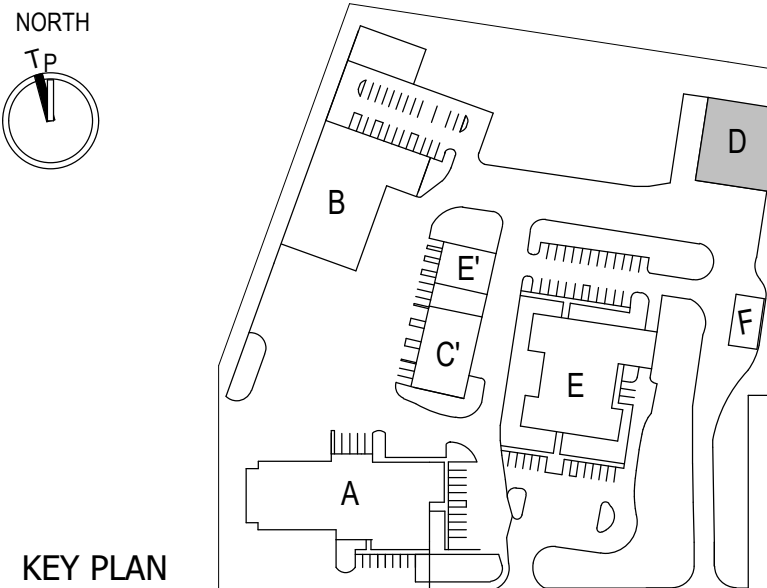
Consulting Engineering
Services, LLC
128 Carnegie Row, Ste. 104
Norwood MA 02062
617.261.7161
ceseng.com
CES #2021530.00



ISSUE DATE
DATE 10/16/2024
DESCRIPTION
BID DOCUMENTS

REVISIONS
DATE
DESCRIPTION

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS,
AND GENERAL NOTES SEE SHEETS APW011 AND
APW012



SCALE: 1/8" = 1'-0"



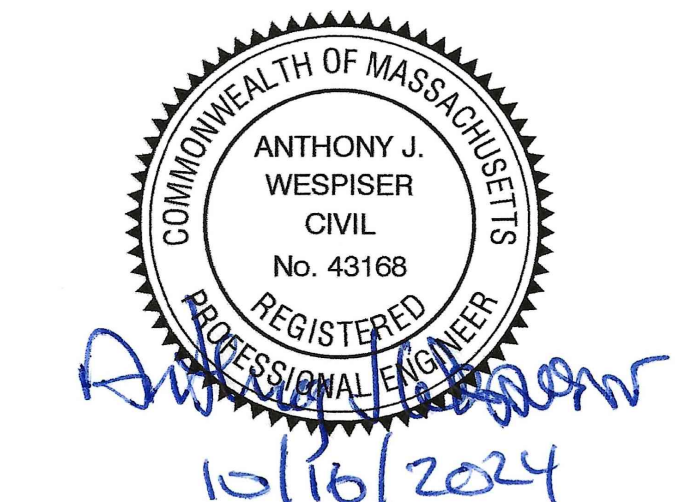
PHASE I - SALT
SHED, FUEL ISLAND
AND ASSOCIATED
SITE WORK

225 CENTRAL STREET,
ABINGTON, MA 02351

PROJECT NO.: ENG22-0465
DRAWN BY: FS

SALT SHED
SECTIONS & 3D
VIEW

DRAWING NO.:
APW1102



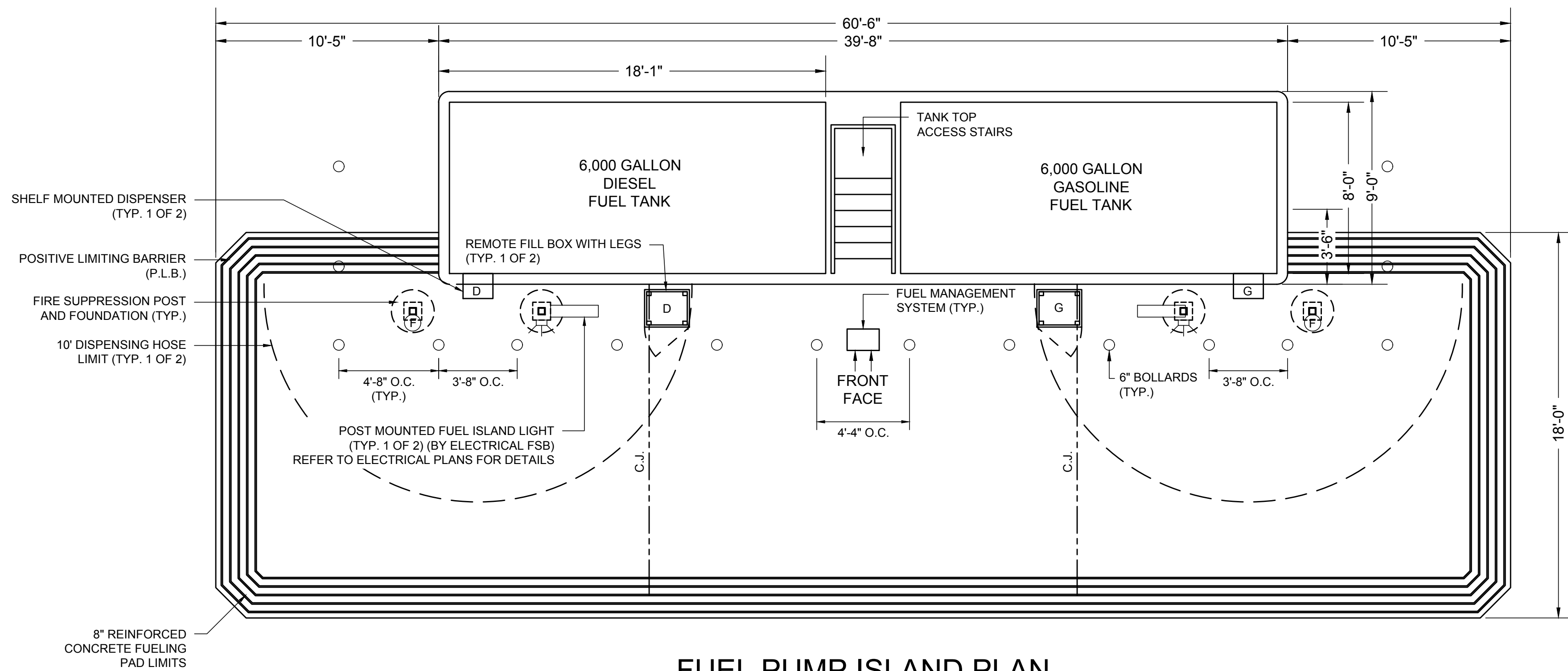
**ABINGTON
FIRE DEPT & DPW
COMPLEX**

225 CENTRAL STREET,
ABINGTON, MA 02351

PROJECT NO.: ENG22-0465 DRAWN BY: TJC

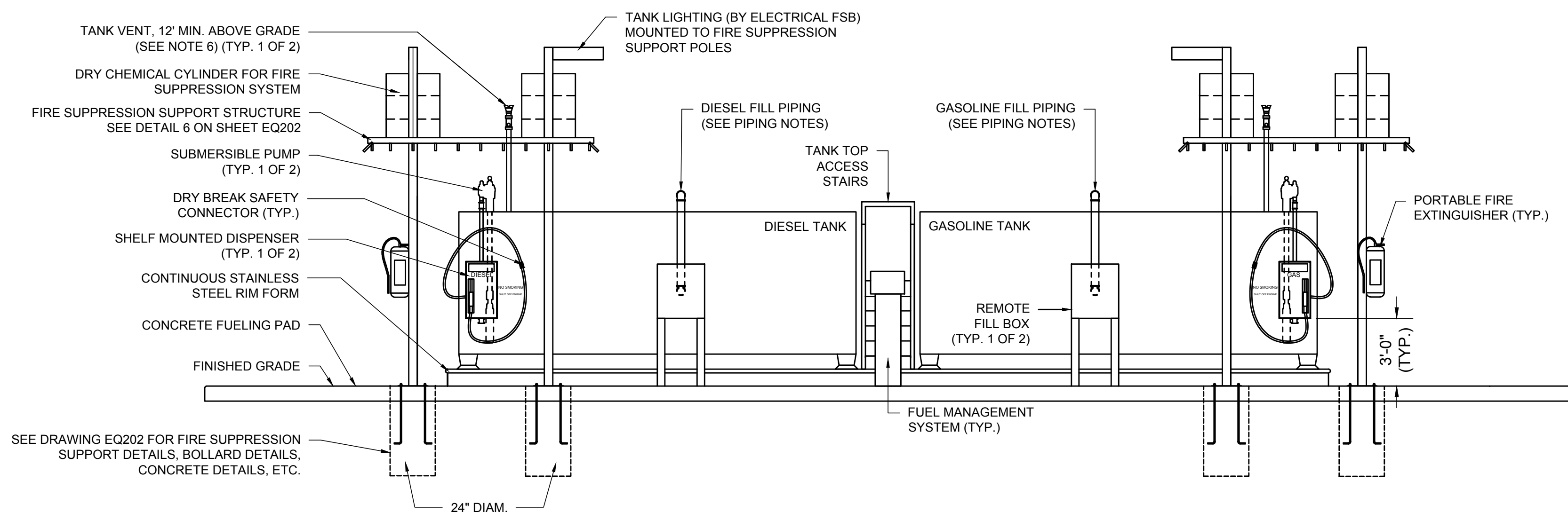
**FUEL ISLAND PLAN
AND ELEVATION**

DRAWING NO.:
EQ201



FUEL PUMP ISLAND PLAN

SCALE: 1/4" = 1'-0"



NOTE: BOLLARDS ARE NOT SHOWN IN ELEVATION VIEW FOR CLARITY

FUEL PUMP ISLAND PLAN - ELEVATION

SCALE: 1/4" = 1'-0"

LEGEND:

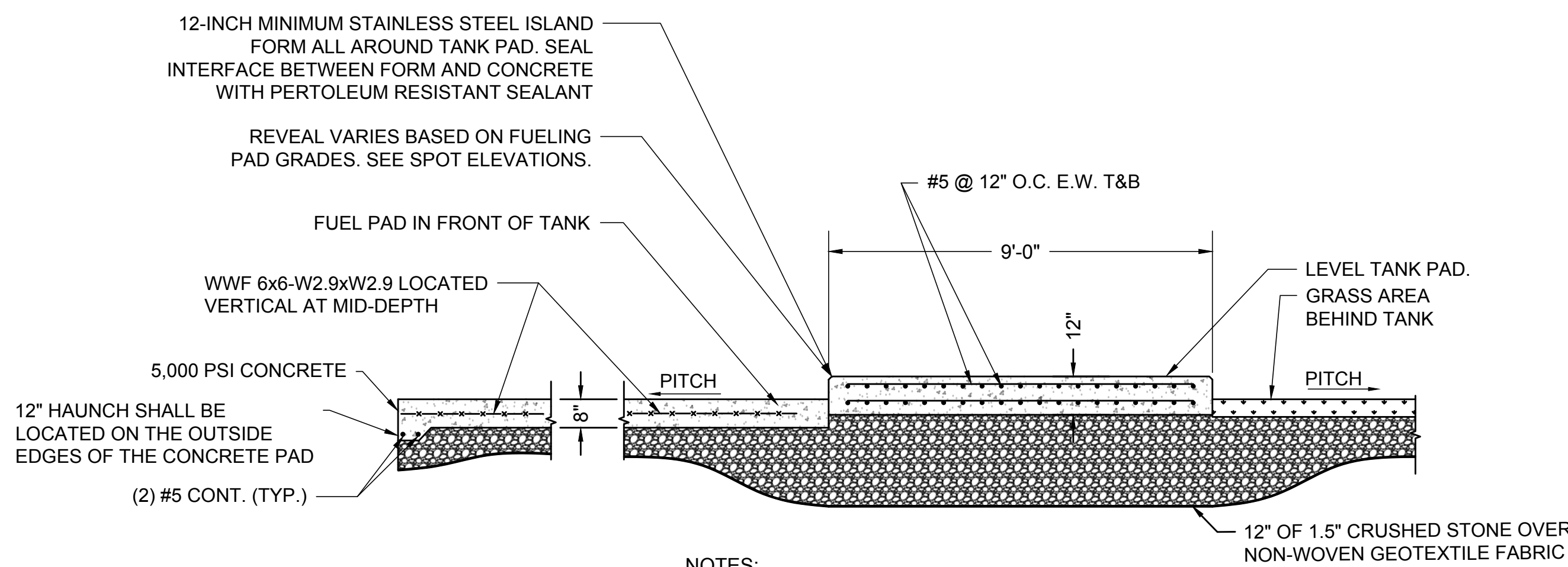
☒ TANK HIGH LEVEL ALARM AND ACKNOWLEDGEMENT SWITCH

C.J. CONTROL JOINT

Ⓢ FIRE EXTINGUISHER
(10LB TYP ABC RATED TO A MINIMUM OF 4A:80B:C)

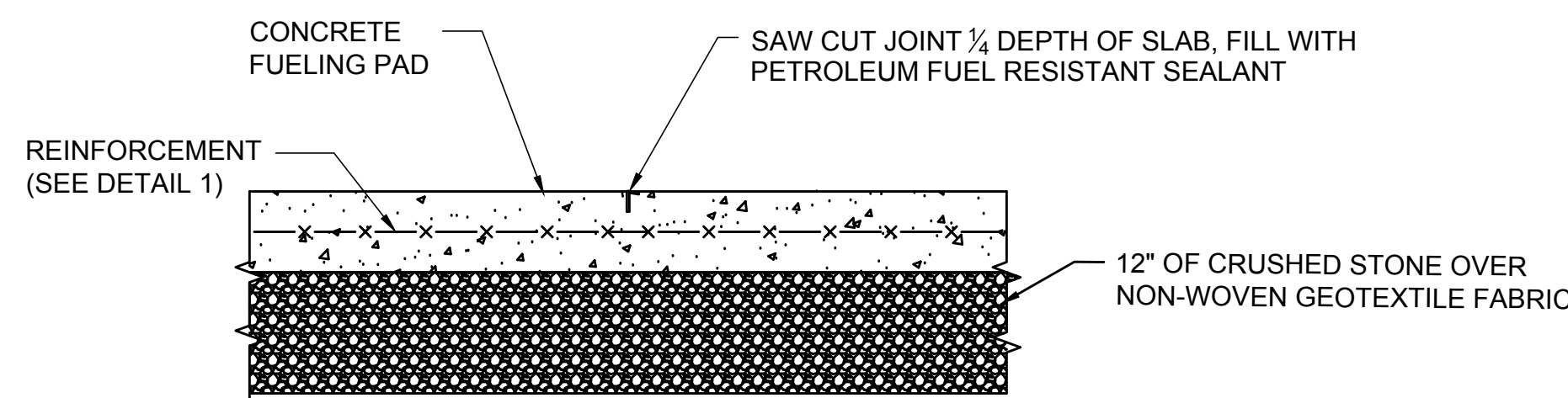
FUEL SYSTEM NOTES:

- THE CONTRACTOR SHALL HAVE THE RESPONSIBILITY OF NOTIFYING AND COORDINATING WITH ALL LOCAL AND STATE OFFICIALS, INCLUDING THE LOCAL FIRE DEPARTMENT. THE CONTRACTOR SHALL PAY ALL INSPECTION, PERMIT, TESTING, AND REGISTRATION FEES IN ORDER TO PROVIDE A COMPLETE AND FULLY PERMITTED AND OPERATIONAL SYSTEM ALONG WITH OBTAINING THE REQUIRED REGISTRATIONS AND PERMITS.
- PLANS ARE SCHEMATIC AND SHOW THE GENERAL LAYOUT OF THE FUEL SYSTEM ONLY AND NOT ALL FUEL SYSTEM COMPONENTS ARE SHOWN. THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT, MATERIALS, LABOR, ETC. INCLUDING PIPING, VALVES, WIRING, AND ALL OTHER APPURTENANCES AS NEEDED IN ORDER TO PROVIDE A COMPLETE AND OPERABLE SYSTEM.
- FINAL LOCATIONS TO BE APPROVED BY THE ENGINEER FOR HIGH LEVEL ALARMS, EXTINGUISHERS, EMERGENCY PUMP SHUTOFF SWITCHES, AND FIRE SUPPRESSION ACTIVATION SWITCHES. FINAL LOCATIONS SHALL BE IN CONFORMANCE WITH ALL LOCAL, STATE, AND FEDERAL FIRE CODES.
- ELEVATION OF TANK PAD SHALL BE AS SHOWN ON THE CIVIL PLANS.
- SEAL ANY PENETRATIONS THROUGH POSITIVE LIMITING BARRIER WITH PETROLEUM RESISTANT SEALANT AS WELL AS DRIVE PAD-TANK PAD INTERFACE AND ALL PENETRATIONS THROUGH THE DRIVE PAD.
- TANK VENTS SHALL EXTEND TO 12' ABOVE THE SURROUNDING FUELING PAD GRADE.
- TANKS SHALL BE ELECTRICALLY GROUNDED IN ACCORDANCE WITH NFPA 70.
- THE TANK FUEL PRODUCT PIPING SHALL BE IDENTIFIED/PAINTED IN ACCORDANCE WITH API STANDARDS WITH WHITE FOR GASOLINE AND YELLOW FOR DIESEL. EACH REMOTE FILL CABINET SHALL BE CLEARLY MARKED FOR THE TANK AND PRODUCT THAT IT SERVES.
- ALL DISPENSER COMPONENTS INCLUDING, BUT NOT LIMITED TO, WHIP, HOSE BREAKAWAY DEVISE, DISPENSING HOSE, AND DISPENSING NOZZLE SHALL BE IN COMPLIANCE WITH NFPA 30A, CHAPTER 6.
- NO BRASS OR ALUMINUM VALVES SHALL BE USED PER NFPA 30 27.4.3.
- EXPANSION RELIEF VALVE PIPING SHALL BE CONNECTED BACK INTO THE PRIMARY TANK AND SHALL MEET ALL PIPING REQUIREMENTS OF NFPA 30 AND NFPA 30A.
- REMOTE EMERGENCY PUMP SHUTOFF SWITCH AND FIRE SUPPRESSION ACTIVATION SWITCH SHALL BE MOUNTED TO THE FUEL ISLAND ELECTRICAL CABINET AS SHOWN ON THE CIVIL PLAN. NOTE THAT THESE SWITCHES SHALL BE LOCATED BETWEEN 20 FT AND 100 FT (WALKING TRAVEL DISTANCE) FROM EACH DISPENSER.
- HEAT DETECTOR AND LIGHT FIXTURES SHALL BE MOUNTED TO THE FIRE SUPPRESSION SUPPORT SYSTEM ABOVE EACH DISPENSER.
- CONTRACTOR SHALL HIRE A FIRE PROTECTION ENGINEER TO PROVIDE STATE OF MASSACHUSETTS CERTIFIED STAMPED FIRE SUPPRESSION PLANS. THE FIRE SUPPRESSION SYSTEM SHALL BE DESIGNED TO REACH THE OUTER LIMITS OF THE AREA DEFINED BY THE 10-FOOT HOSE ARC.
- DISPENSER SHELF SHALL BE OFFSET FROM TANK WALL TO ACCOMMODATE 1.5" PIPING BETWEEN THE BACK OF THE DISPENSER AND TANK.
- ALL NEW PRODUCTS SPECIFIED ON EQ200 SERIES PLANS ARE USED AS THE BASIS OF DESIGN FOR PUBLIC BID AND EQUIVALENT ALTERNATIVE PRODUCTS MAY BE PROPOSED BY THE CONTRACTOR AS AN "OR EQUAL". FINAL MAKE AND MODEL NUMBERS TO BE INSTALLED TO BE FINALIZED THROUGH THE SUBMITTAL PROCESS.
- TANK SHALL HAVE WEAR PLATES BENEATH ALL OPENINGS.
- CONTRACTOR SHALL CONFIRM LOCATIONS OF BOLLARDS WITH ENGINEER PRIOR TO INSTALLATION.

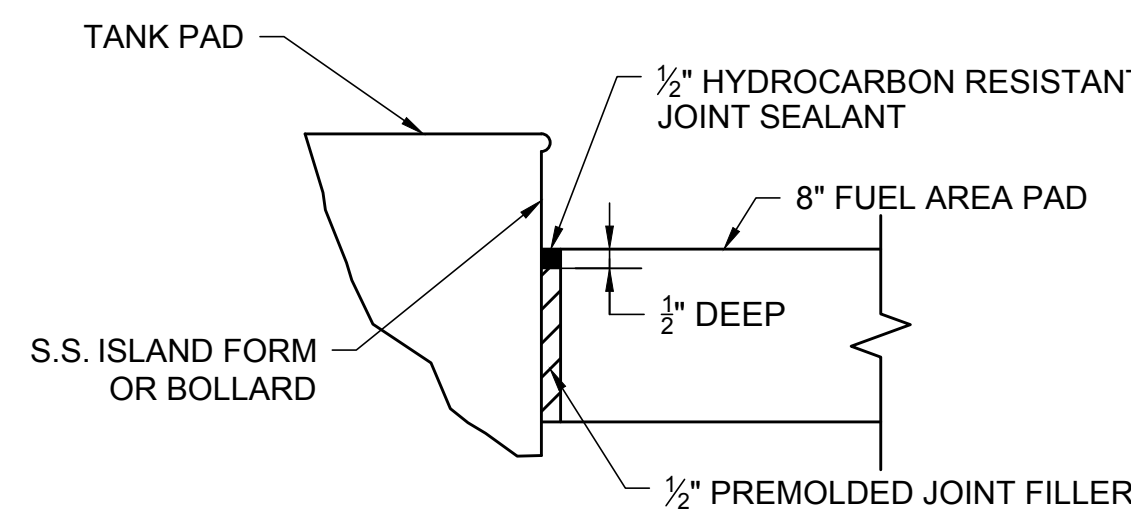


- NOTES:
1. CONCRETE PADS SHALL BE 5,000 PSI AND COATED WITH SALT RESISTANT SEALANT AS SPECIFIED. SEE SECTION 03 30 00 - CAST IN PLACE CONCRETE.
 2. UNDOCUMENTED FILL SHALL BE COMPLETELY REMOVED WITHIN THE ZONE-OF-INFLUENCE BENEATH THE FUEL PADS AS OBSERVED BY THE GEOTECHNICAL ENGINEER, REFER TO THE EARTHWORK SPECIFICATION FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

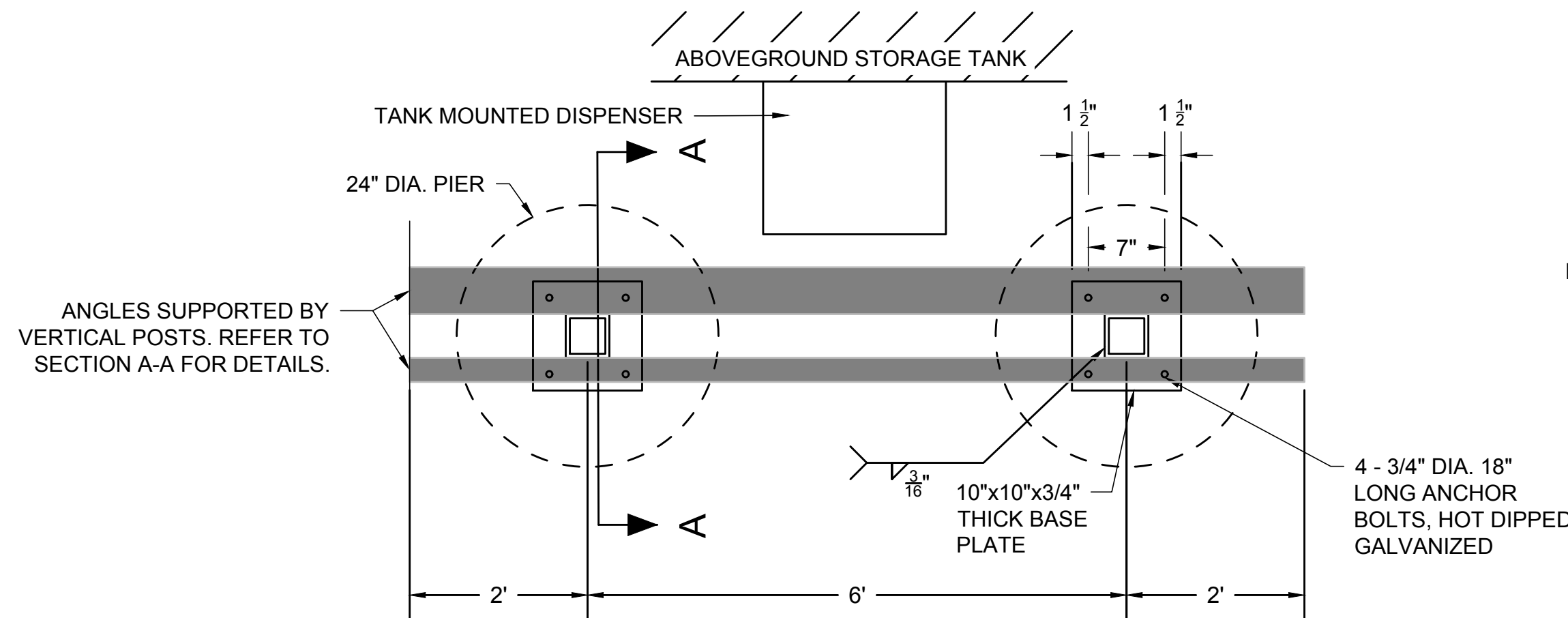
1 ON-ROAD CONCRETE FUELING PAD
SCALE: N.T.S.



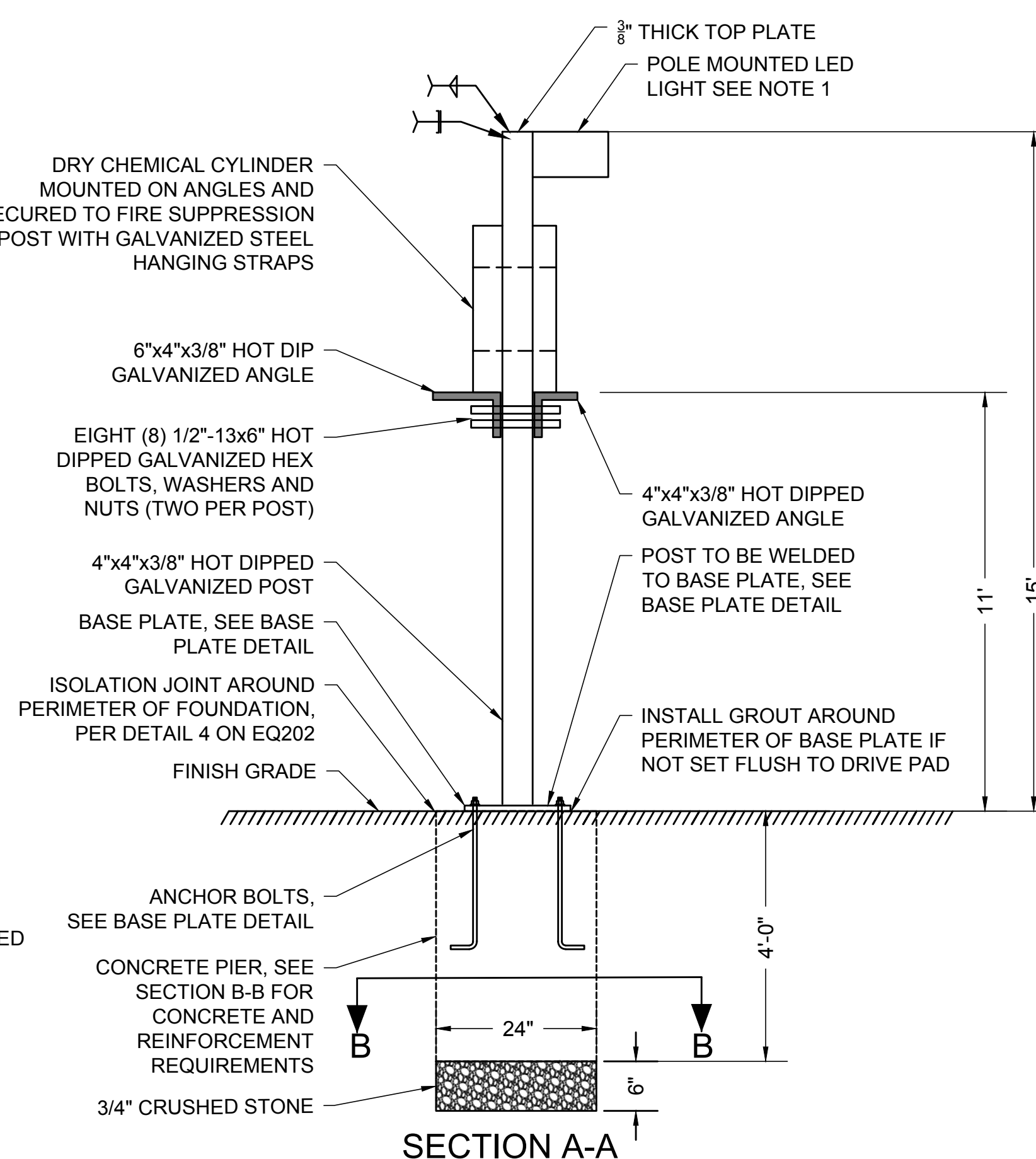
3 CONTROL JOINT (C.J.)
SCALE: N.T.S.



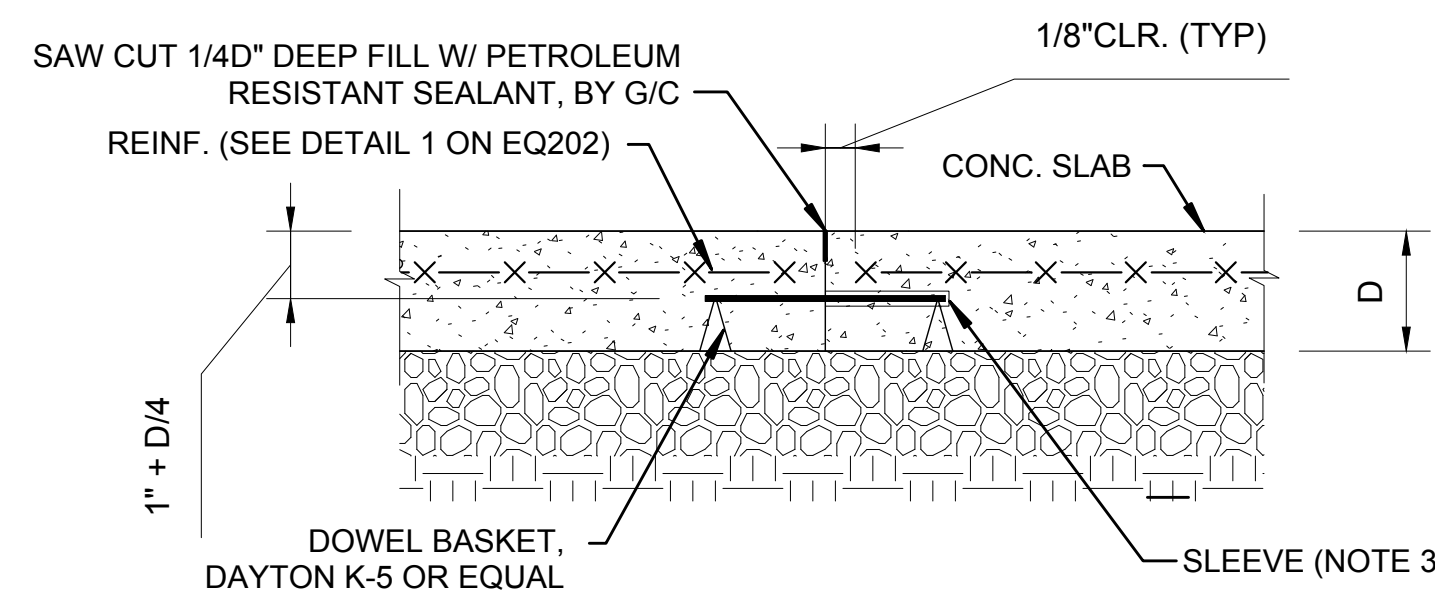
4 ISOLATION JOINT DETAIL
SCALE: N.T.S.



6 FIRE SUPPRESSION SUPPORT DETAIL
SCALE: N.T.S.



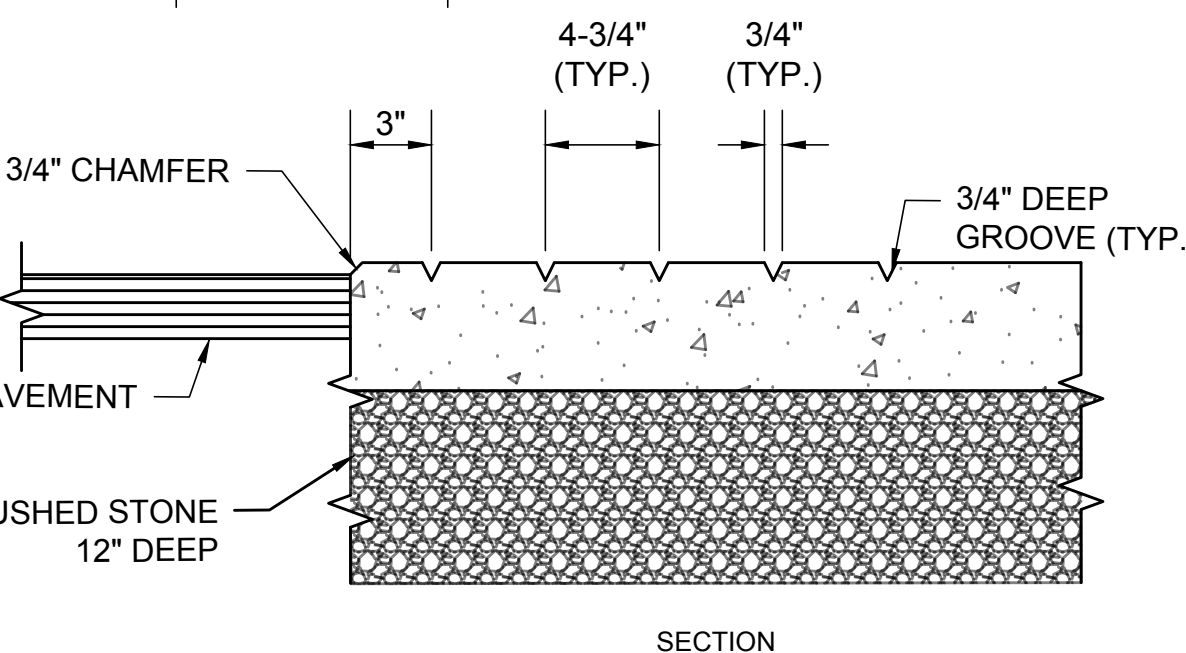
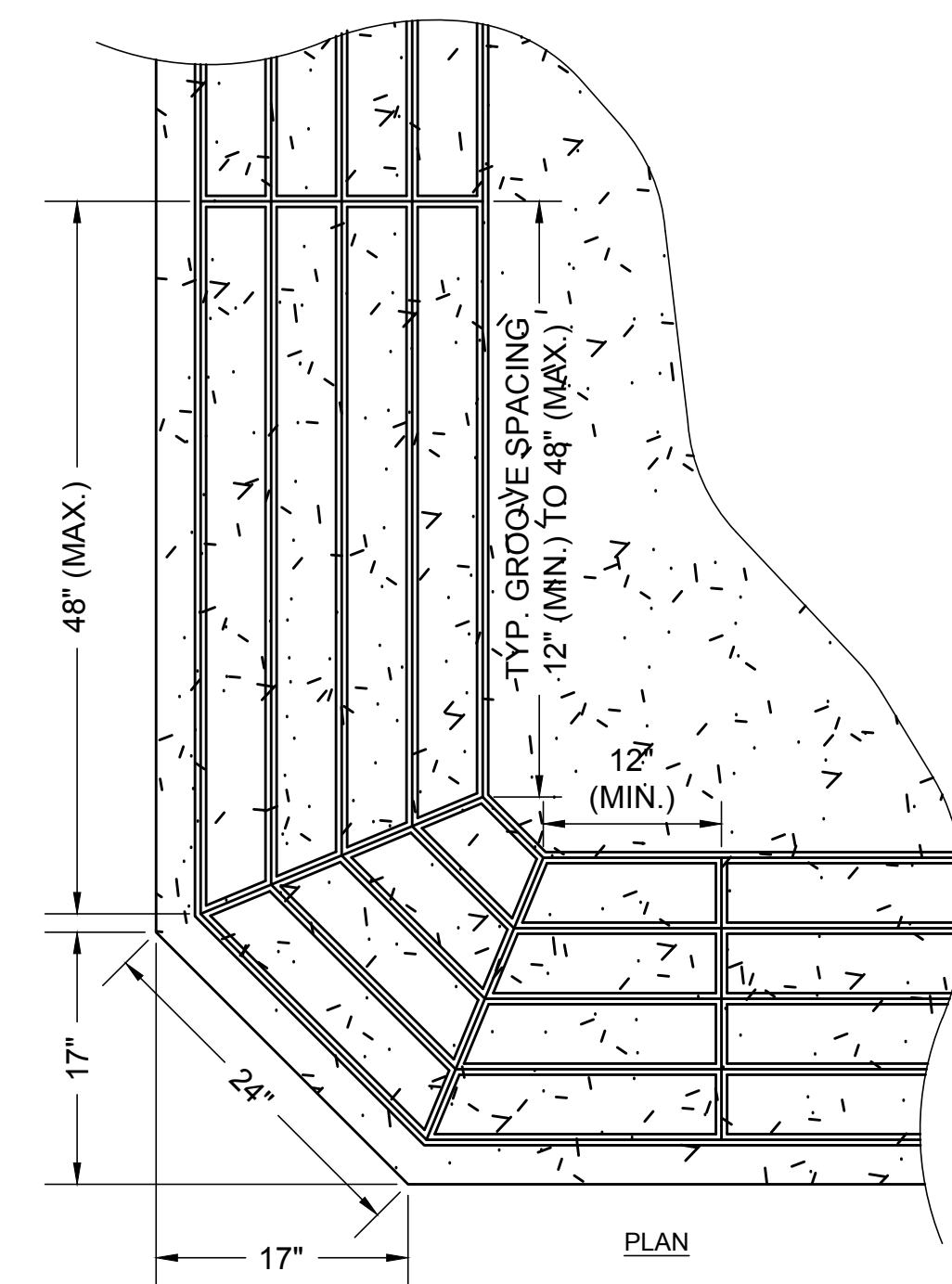
SECTION A-A



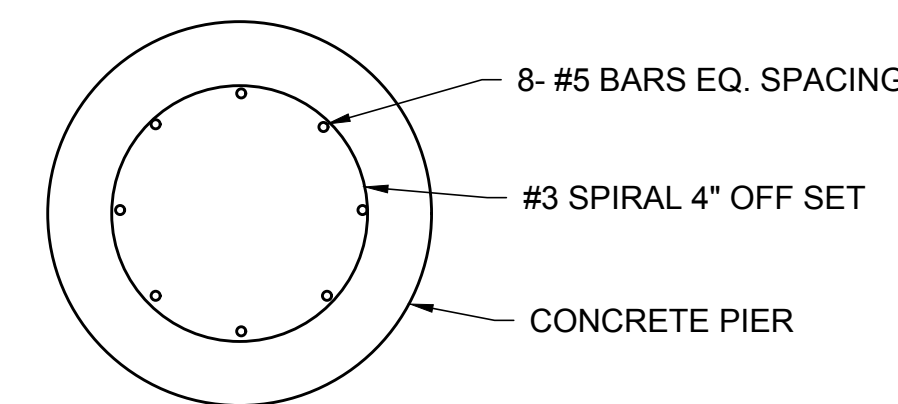
SLAB THICKNESS, IN.	CONSTRUCTION JOINT		
	MIN. DOWEL LENGTH (L), IN.	MAXIMUM DOWEL SPACING, IN.	DOWEL DIAMETER AND TYPE
LESS THAN 6	N/A	N/A	N/A
8 TO AND INCLUDING 12	16	12	1" BAR

2 TYPICAL CONSTRUCTION JOINT DETAIL
SCALE: N.T.S.

- NOTE(S):
1. ALL DOWELS SHALL BE STRAIGHT, SMOOTH AND FREE FROM BURRS AT THE ENDS
 2. ONE-HALF OF EACH DOWEL SHALL BE OILED OR OTHERWISE TREATED TO PREVENT BONDING WITH THE CONCRETE.
 3. CONTRACTOR SHALL SECURELY SUPPORT DOWELS BY MEANS OF DOWEL BASKETS TO PREVENT ANY DISPLACEMENT OF THE DOWELS DURING CONCRETE PLACEMENT
 4. STOP REINFORCING 2" FROM EACH SIDE OF CONSTRUCTION/CONTROL JOINT.



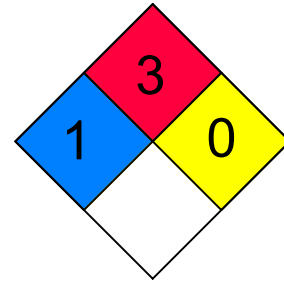
5 POSITIVE LIMITING BARRIER DETAIL
SCALE: N.T.S.



SECTION B-B

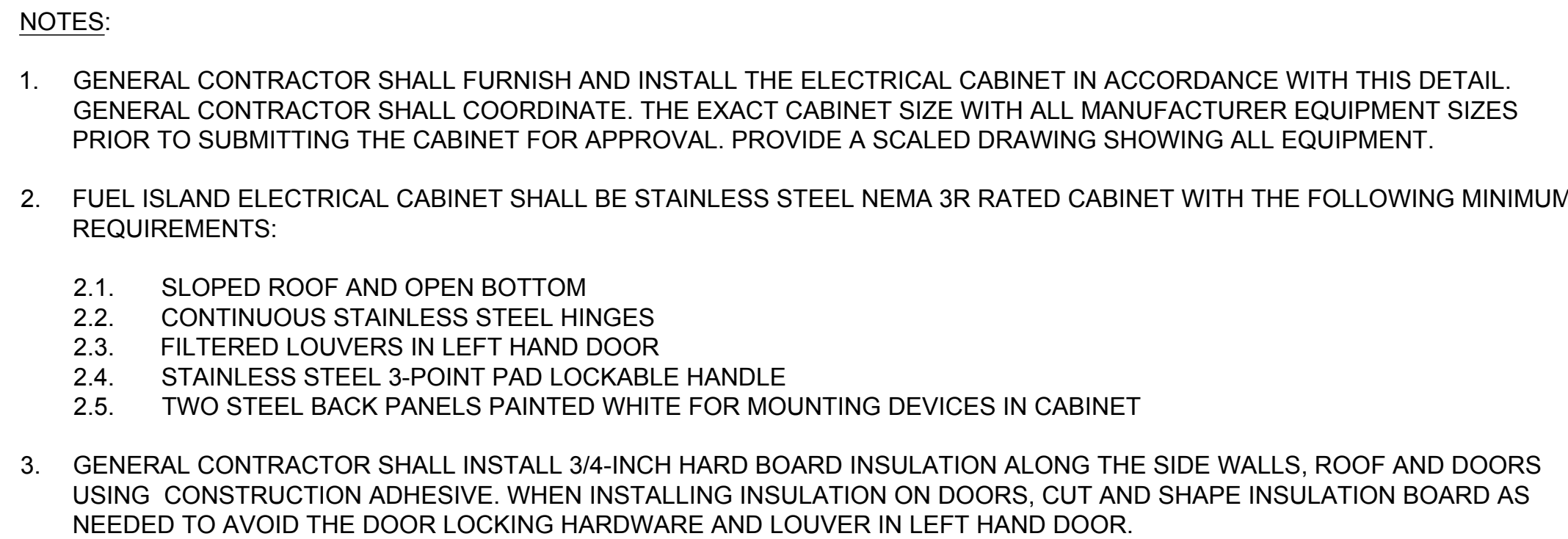
- NOTES:
1. CONTRACTOR SHALL PROVIDE TWO (2) POLE MOUNTED LED LIGHTS, ONE PER DISPENSER. (BY ELECTRICAL FSB)
 2. CONTRACTOR SHALL PROVIDE FIRE SUPPRESSION ENGINEERING DRAWINGS STAMPED BY A MASSACHUSETTS PROFESSIONAL ENGINEER. REFER TO SPECIFICATION SECTION 21 24 00 FUEL ISLAND FIRE SUPPRESSION SYSTEM FOR ADDITIONAL INFORMATION.
 3. CONCRETE SHALL BE 4,000 PSI.

TANK ID:	#1	#2
CONTENTS:	DIESEL	GASOLINE
SAFE FILL VOLUME (HEIGHT):	5,400 GALLONS	5,400 GALLONS
NFPA HAZARD ID:		

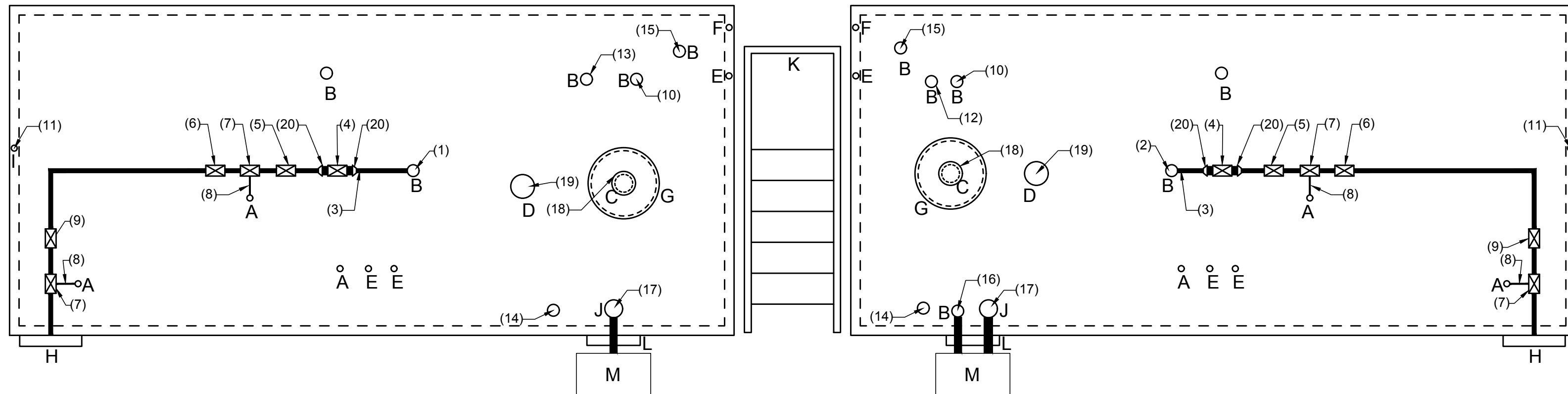


-
- Diagram illustrating the cross-section of a fuel tank assembly with the following components and dimensions:
- Dimensions:**
 - 1" (Top section)
 - 3'-6" (Main vertical section)
 - GRADE (Ground level)
 - 4'-6" (Lower vertical section)
 - 6" (Bottom section)
 - 18" (Base width)
 - Components:**
 - TOP OFF W/ CONCRETE
 - 6" CONCRETE FILLED GALVANIZED STEEL PIPE WITH SAFETY YELLOW PLASTIC PROTECTIVE SLEEVE
 - TANK PAD/CONCRETE FUELING PAD
 - 3/4" CRUSHED STONE 12" DEEP
 - CONCRETE PIER FOUNDATION

2 PAD MOUNTED ELECTRICAL CABINET DETAIL
SCALE: N.T.S.



6,000 GALLON GASOLINE



1. SEE CONSTRUCTION NOTES ON EQ203 FOR ADDITIONAL INFORMATION/REQUIREMENTS.
2. FINAL TANK FITTING LAYOUT AND QUANTITY TO BE ADJUSTED AS NEEDED AND CONFIRMED DURING THE SUBMITTAL PROCESS TO MEET THE DESIGN LAYOUT AND TO MEET MANUFACTURER AND CODE REQUIREMENTS.
3. TANK TOP PIPING SUPPORT BRACKETS (NOT SHOWN) SHALL BE INCLUDED TO SUPPORT DISPENSER PIPING AS NEEDED.
4. CONTRACTOR SHALL SUPPLY AND INSTALL ALL VALVES, FITTINGS, PIPING, AND EQUIPMENT AS NEEDED TO PROVIDE A COMPLETE AND OPERABLE SYSTEM.
5. MANUFACTURERS AND MODEL NUMBERS LISTED ARE NOT INTENDED TO LIMIT COMPETITION OR TO LIMIT THE EQUIPMENT TO ANY SPECIFIC MANUFACTURER. THE MAKE AND MODEL NUMBERS LISTED ARE LISTED TO SET A MINIMUM STANDARD OF QUALITY. ADDITIONAL ACCEPTABLE MANUFACTURERS ABLE TO MEET THE SPECIFIED REQUIREMENTS AND QUALITY MAY BE APPROVED BY THE ENGINEER.

- A. 2" FEMALE FIREGUARD COUPLING
- B. 4" FEMALE FIREGUARD COUPLING
- C. 8" FFSO 150# FLANGE - PRIMARY EMERGENCY VENT USE ONLY
- D. 8" FFSO 150# FLANGE THROUGH OUTER SHELL ONLY. MARK WITH SPECIAL WARNING LABEL
- E. 1" INTERSTITIAL EMERGENCY VENT USE ONLY
- F. 2" FITTING THROUGH OUTER SHELL ONLY WITH CAST IRON PLUG - FOR MFG USE ONLY
- G. 2" INTERSTITIAL MONITOR PIPE - MALE NPT END
- H. 24" TIGHT BOLT MANWAY WITH "C" MOUNTED IN COVER
- I. DISPENSER BRACKET MOUNTED TO SIDE OF TANK
- J. 2" INTERSTITIAL MONITOR PIPE - MALE NPT END - BULK HEAD MONITOR USE
- K. 6" FEMALE FIREGUARD COUPLING
- L. TANK ACCESS STAIRS
- M. PIPING SUPPORT BRACKET
- N. REMOTE FILL BOX

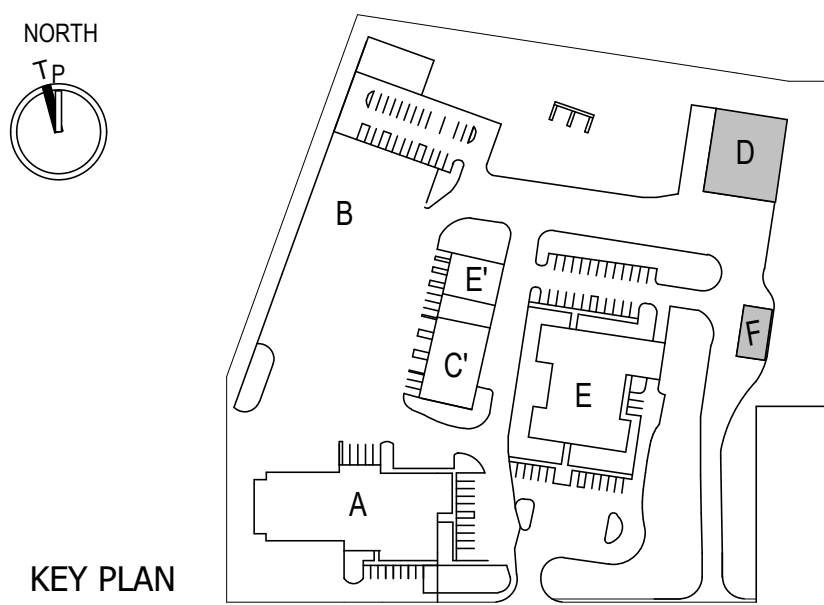
1. 1.5 HP SUBMERSIBLE PUMP (DIESEL)
2. 3/4" HP SUBMERSIBLE PUMP (GASOLINE)
3. 1.5" SCH 40 CARBON STEEL PIPE
4. 2" THREADED GATE VALVE WITH EXPANSION RELIEF (MORRISON BROS. 535D1-0300 AV)
5. 1.5" EMERGENCY VALVE (MORRISON BROS. 346D1-0400 AV)
6. 1.5" SOLENOID VALVE (MORRISON BROS. 710SS-2150 1V)
7. 0.5" EXPANSION RELIEF VALVE (MORRISON BROS. 078D1-0200 AV)
8. 0.5" SCH 40 CARBON STEEL PIPE FROM EXP. RELIEF VALVE TO TANK
9. 1.5" BALL VALVE (MORRISON BROS. 691 BSS)
10. TANK LEVEL PROBE/HIGH LEVEL SENSOR (VEEDER ROOT 846391-399)
11. INTERSTITIAL SENSOR (VEEDER ROOT 794390-420)
12. 3" CARBON STEEL VENT PIPE WITH PV VENT CAP
(HUSKY 005885, PRES 2.5-6"W, VAC 6"-10" W.C. AND 005041 ADAPTER)
13. 3" CARBON STEEL VENT PIPE WITH ATMOSPHERIC VENT CAP (OPW 23-0055)
14. CLOCK GAUGE (MORRISON BROS. 81TA 0400EVR)
15. GAUGE STICK PORT WITH CAP (MORRISON BROS. 305GSP2000AKEVR)
16. VAPOR RECOVERY (GASOLINE ONLY)
17. 3" PRODUCT FILL WITH OVERFLOW PREVENTION VALVE
18. PRIMARY EMERGENCY VENT (MORRISON BROS. 2440F-0200AEVR)
19. SECONDARY EMERGENCY VENT (MORRISON BROS. 2440F-0100AEVR)
20. 2" TO 1.5" CARBON STEEL THREADED REDUCING FITTING

ISSUE DATE

DATE DESCRIPTION
10/16/2024 BID DOCUMENTS

REVISIONS

DATE DESCRIPTION



SCALE: AS NOTED



ABINGTON DPW
FACILITY

225 CENTRAL STREET,
ABINGTON, MA 02351

PROJECT NO.: ENG22-0465 DRAWN BY: RNM

ELECTRICAL
ABBREVIATIONS,
NOTES, SYMBOLS
AND DETAILS

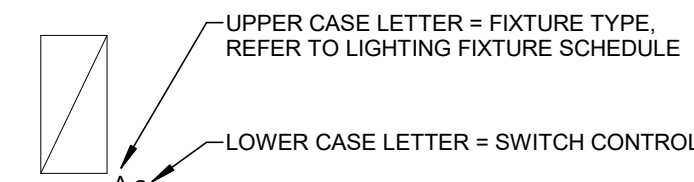
DRAWING NO.:

E0.01

ELECTRICAL GENERAL NOTES

- BRANCH CIRCUITS AND FEEDER CIRCUITS SHALL BE CONCEALED IN WALLS AND ABOVE CEILINGS WHERE POSSIBLE, INCLUDING HOMERUNS TO PANELBOARDS. BRANCH CIRCUITS AND FEEDERS SHALL NOT BE ROUTED IN OR UNDER SLAB UNLESS SPECIFICALLY INDICATED ON ELECTRICAL FLOOR PLANS OR DETAILS. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- BRANCH CIRCUITS SHALL BE 2#12,#12G, 3/4" C, TO NEW 20A/1P CIRCUIT BREAKER IN PANEL INDICATED UNLESS NOTED OTHERWISE.
- 120V, 1-PHASE, 20A BRANCH CIRCUITS EXCEEDING 150' IN LENGTH SHALL BE 2#10,#10G, 3/4" C, UNLESS NOTED OTHERWISE.
- DEVICES SHALL BE LABELED WITH SOURCE PANEL AND CIRCUIT NUMBER(S).
- REFER TO ARCHITECTS REFLECTED CEILING PLAN FOR EXACT LOCATION OF CEILING MOUNTED ELECTRICAL DEVICES. REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT LOCATION OF WALL MOUNTED ELECTRICAL DEVICES.
- PROVIDE FIRE STOPPING AND SMOKE BARRIER SEALING OF PENETRATIONS THROUGH FIRE WALLS OR SMOKE BARRIERS AS REQUIRED. REFER TO ARCHITECTURAL FLOOR PLANS AND CODE SHEETS FOR WALLS.
- COORDINATE LOCATIONS OF ELECTRICAL DEVICES AND CONTROLS WITH RESPECT TO LOCATIONS OF CASEWORK AND EQUIPMENT PRIOR TO ROUGH-IN.
- WHEN DEVICES ARE SHOWN ON PLANS OFFSET FROM ONE ANOTHER, DEVICES SHALL BE MOUNTED IN LINE, CENTERED ON WALL.
- SHARED NEUTRAL WIRING IS NOT ACCEPTABLE, UNLESS NOTED OTHERWISE ON DRAWINGS. PROVIDE A DEDICATED NEUTRAL WIRE FOR EACH CIRCUIT, WHERE APPLICABLE.
- DRAWINGS ARE DIAGRAMMATIC ONLY. DO NOT SCALE ELECTRICAL DRAWINGS. FIELD CONDITIONS AND ARCHITECTURAL ELEVATIONS AND DIMENSIONS SHALL GOVERN EXACT LOCATION AND MOUNTING HEIGHTS OF ELECTRICAL DEVICES AND RACEWAYS.
- FINISHES AND COLOR OF ELECTRICAL WIRING DEVICES, EXPOSED RACEWAY, LIGHT FIXTURES, AND OTHER ELECTRICAL DEVICES SHALL BE DETERMINED BY THE ARCHITECT.
- ELECTRICAL WORK SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE (OTHER THAN ROOF DECK).
- THE ELECTRICAL CONTRACTOR SHALL PERFORM CORES REQUIRED FOR ELECTRICAL WORK.
- BUILDING WIRE AND CABLE NOT IN RACEWAY SHALL BE PLENUM RATED.
- PROVIDE SURFACE MOUNTED RACEWAY FOR NEW DEVICES LOCATED ON EXISTING TO REMAIN CMU OR MASONRY WALLS, UNLESS OTHERWISE NOTED. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS REGARDING SURFACE MOUNTED RACEWAY APPLICATIONS AND WIRING METHODS.

LIGHTING FIXTURE TAGS



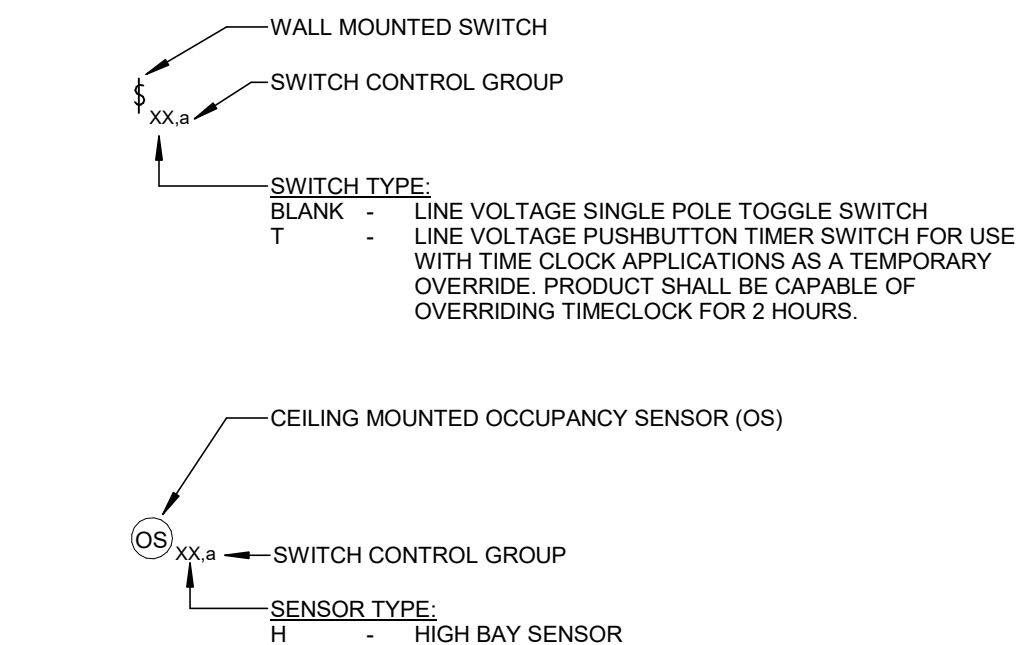
NOTES

- FIXTURE CONTROL DESIGNATION REFERS TO ZONE/SWITCH/RELAY CONTROL OF FIXTURES CONTROLLED BY COMMON:
A. SWITCH FOR LIGHTING IN OPEN AREA.
B. ALL CONTROL DEVICES (SWITCHES, CONTROL PANELS, OCCUPANCY/VACANCY SENSORS, ETC) WITH CONTROL DESIGNATIONS REFERS TO COMMON CONTROL OF THE SAME ZONE/SWITCH/RELAY CONTROL.
- WHERE CONTROL DESIGNATION IS NOT SHOWN, ALL FIXTURES IN ASSOCIATED ROOM OR SPACE SHALL BE CONTROLLED SIMULTANEOUSLY VIA THE CONTROL DEVICES INDICATED ON PLANS.
- UNSWITCHED LIGHTING BRANCH CIRCUIT WIRING IS SHOWN TO A SINGLE FIXTURE IN EACH COMMON CONTROL ZONE, UNLESS OTHERWISE INDICATED. PROVIDE 2#12,#12G,3/4" C FOR SWITCHED WIRING TO ALL COMMON CONTROL FIXTURES.
- REFER TO LIGHTING CONTROL DETAILS FOR ADDITIONAL WIRING AND CONTROL INFORMATION.

ELECTRICAL SYMBOLS

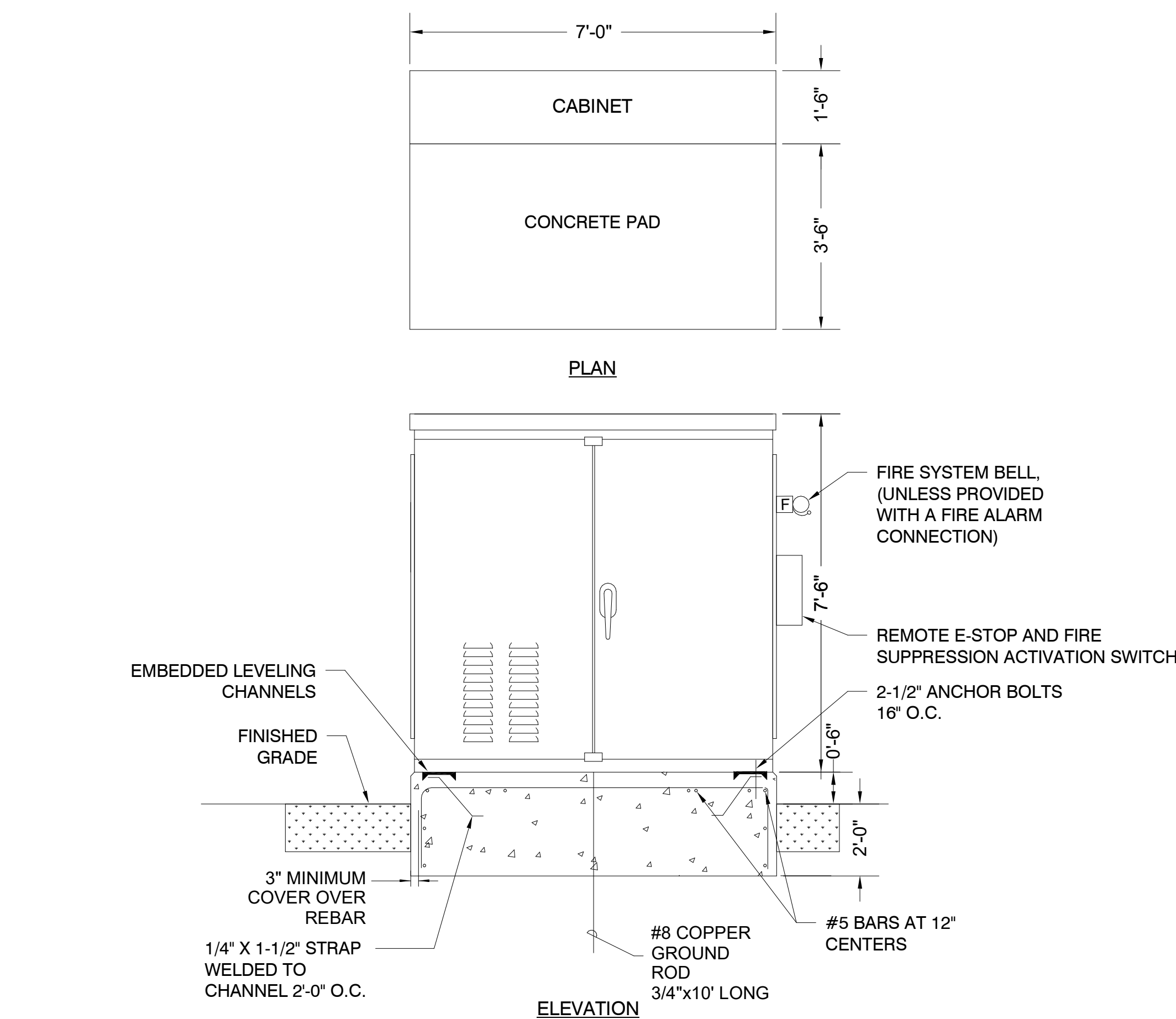
SYMBOL	DESCRIPTION
	DUPLEX WALL MOUNTED RECEPTACLE, 48" AFF UNLESS OTHERWISE NOTED
	RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTION
	RECEPTACLE WITH WEATHERPROOF COVER
	PENDANT MOUNTED LIGHTING FIXTURE
	TIME CLOCK
	BRANCH CIRCUIT WIRING, CONCEALED IN WALLS OR CEILINGS (2#12, #12G, 3/4" C, UNLESS OTHERWISE INDICATED)
	SWITCHED BRANCH CIRCUIT WIRING (2#12, #12G, 3/4" C, UNLESS OTHERWISE INDICATED)
	JUNCTION BOX

LIGHTING SWITCH AND SENSOR TAGS



NOTES:

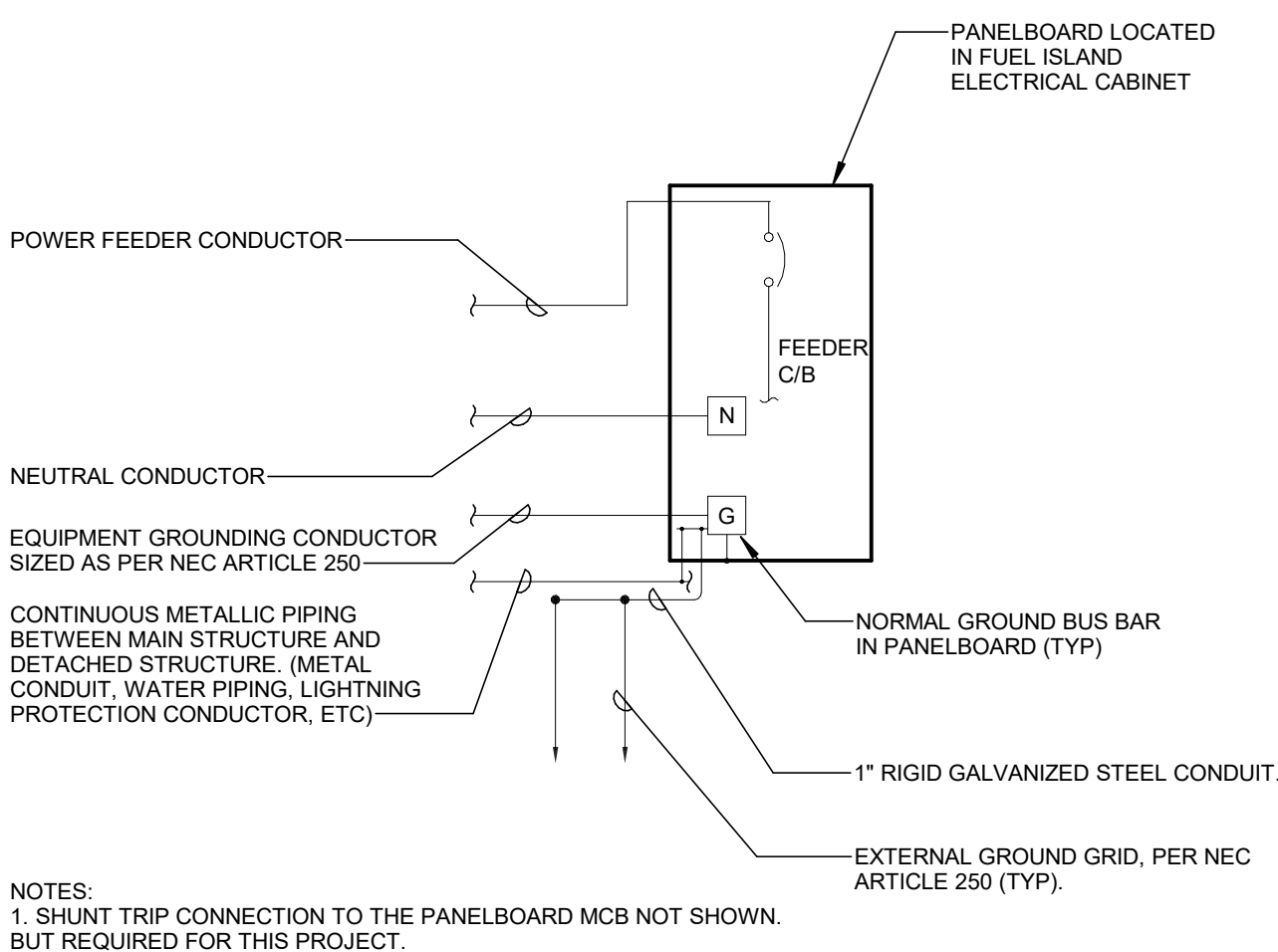
- FIXTURE(S) SHALL BE CONTROLLED BY SWITCH IN THE ROOM UNLESS OTHERWISE NOTED ON PLAN.
- REFER TO LIGHTING CONTROL DETAILS FOR ADDITIONAL INFORMATION ON WIRING AND SWITCHING.
- WALL MOUNTED SWITCHES SHALL BE MOUNTED AT 42" AFF UNLESS OTHERWISE NOTED. COORDINATE WITH ARCHITECT.
- SET ALL OCCUPANCY TYPE SENSORS TO AUTO-ON, AUTO-OFF MODE.
- REFER TO CONTROL SCHEME NOTES AND CONTROL SCHEDULE FOR ADDITIONAL INFORMATION.
- REFER TO SYMBOL LIST FOR ADDITIONAL LIGHTING CONTROL DEVICES.
- WHERE SWITCHES ARE NOT TAGGED WITH CONTROL LETTER ON PLANS, ALL FIXTURES IN ASSOCIATED ROOM SHALL BE CONTROLLED SIMULTANEOUSLY VIA CONTROLS SPECIFIED.



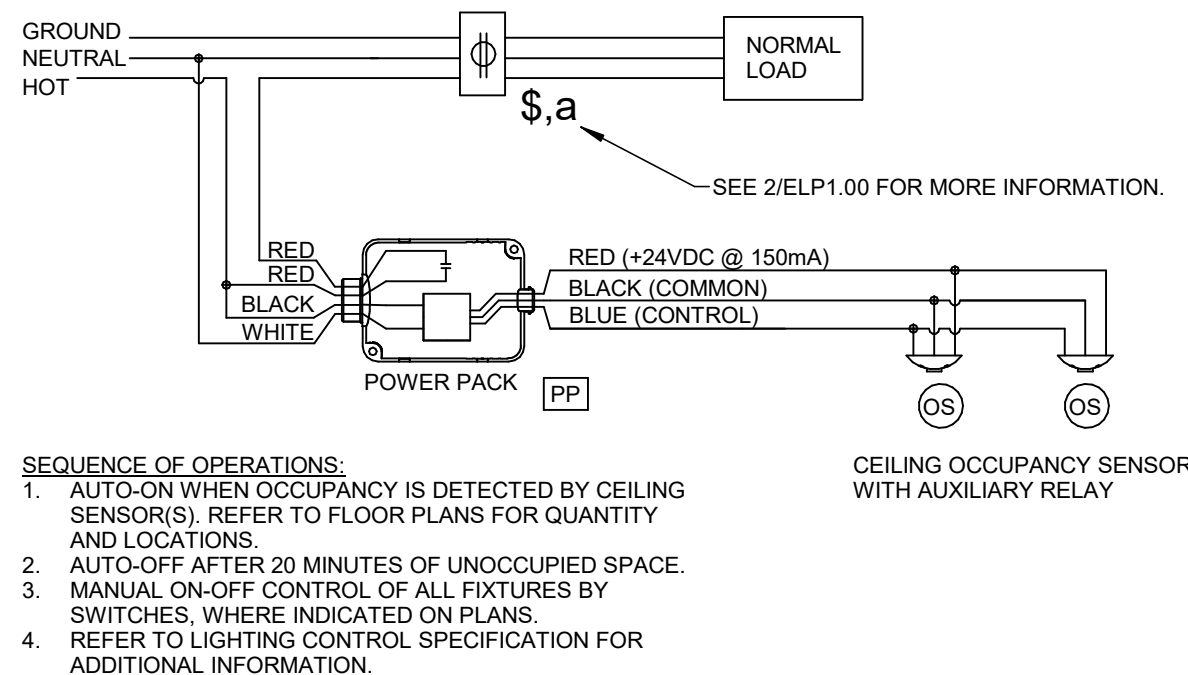
NOTES:

- FUEL ISLAND ELECTRICAL CABINET IS SHOWN ON ELECTRICAL DRAWINGS FOR COORDINATION ONLY AND SHALL BE PROVIDED BY THE GENERAL CONTRACTOR.
- CONTRACTOR SHALL COORDINATE WITH THE EXACT CABINET SIZE WITH ALL MANUFACTURER EQUIPMENT SIZES PRIOR TO SUBMITTING THE CABINET FOR APPROVAL. PROVIDE A SCALED DRAWING SHOWING ALL EQUIPMENT.
- FUEL ISLAND ELECTRICAL CABINET SHALL BE STAINLESS STEEL NEMA 3R RATED CABINET WITH THE FOLLOWING MINIMUM REQUIREMENTS:
 - SLOPED ROOF AND OPEN BOTTOM
 - CONTINUOUS STAINLESS STEEL HINGES
 - FILTERED LOUVERS IN LEFT HAND DOOR
 - STAINLESS STEEL 3-POINT PAD LOCKABLE HANDLE
 - TWO STEEL BACK PANELS PAINTED WHITE FOR MOUNTING DEVICES IN CABINET
- CONTRACTOR SHALL INSTALL 3/4-INCH HARD BOARD INSULATION ALONG THE SIDE WALLS, ROOF AND DOORS USING CONSTRUCTION ADHESIVE. WHEN INSTALLING INSULATION ON DOORS, CUT AND SHAPE INSULATION BOARD AS NEEDED TO AVOID THE DOOR LOCKING HARDWARE AND LOUVER IN LEFT HAND DOOR.

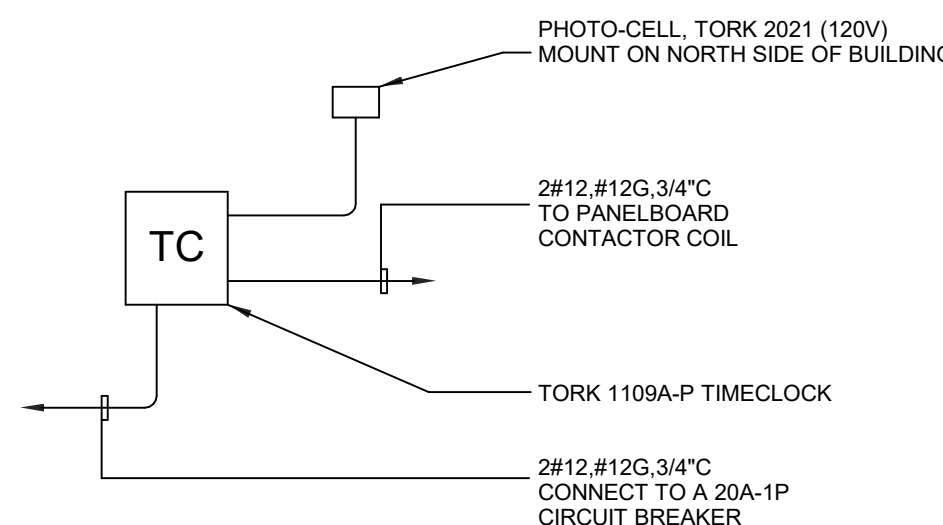
1 PAD MOUNTED FUEL ISLAND ELECTRICAL CABINET
NTS



2 DETACHED STRUCTURE PANELBOARD GROUNDING
NTS



3 TYPICAL STANDALONE OCCUPANCY SENSOR
NTS



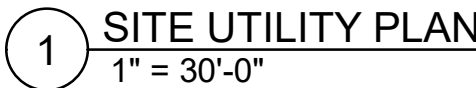
4 TYPICAL TIME CLOCK
NTS

1. REFER TO DRAWING E0.01 FOR SYMBOLS LIST.
2. REFER TO DRAWING E0.01 AND THIS SHEET FOR SITE ELECTRICAL DETAILS.
3. WHERE UNDERGROUND UTILITIES ARE LIKELY TO BE ENCOUNTERED THE CONTRACTOR SHALL EXCAVATE BY HAND.
4. PROVIDE CONDUIT PLUGS WITH 1/4" NYLON DRAG LINE ATTACHED IN ALL EMPTY CONDUITS.
5. EXISTING OVERHEAD UTILITIES NOT SHOWN. COORDINATE WITH UTILITY COMPANY AS REQUIRED.

THE CONTRACTOR IS TO BE FULLY RESPONSIBLE FOR CONTACTING THE LOCAL CABLE, TELEVISION COMPANY, POWER COMPANY, TELEPHONE COMPANY, GAS COMPANY, WATER AND SEWER COMPANY AND ANY OTHER UTILITY COMPANY WITHIN THE AREA PRIOR TO PROCEEDING WITH ANY EXCAVATION. BY LAW, THE CONTRACTOR IS REQUIRED TO CALL BEFORE DOING ANY EXCAVATION, DIGGING HOLES OR DRIVING POSTS REGARDLESS OF WHETHER IT IS WITHIN THE STREET LINE OR ON PRIVATE PROPERTY. OBTAIN INFORMATION REGARDING THE EXISTENCE AND LOCATION OF ANY UNDERGROUND FACILITIES BY CALLING 811.

DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. CONSULT THE ARCHITECTURAL DRAWINGS AND DETAILS FOR EXACT LOCATION OF FIXTURES AND EQUIPMENT; WHERE SAME ARE NOT DEFINITELY LOCATED, OBTAIN THIS INFORMATION FROM THE ARCHITECT. (DO NOT SCALE THE DRAWINGS)

1. PITCH ALL UNDERGROUND CONDUITS SUCH THAT THEY ARE ANGLED DOWNWARDS AWAY FROM THE BUILDING. CONDUITS SHALL NOT BE PITCHED UPWARDS TOWARD THE BUILDING, ALLOWING GROUND WATER TO ENTER BUILDING.
2. PROVIDE FOAM SEALANT FOR ALL ACTIVE ELECTRIC CONDUITS CONTAINING CONDUCTORS, EQUAL TO POLYWATER FST. LOCATE AT INTERIOR END OF EACH ACTIVE CONDUIT (AT EXTERIOR ENCLOSURE AND WHERE CONDUIT TERMINATES IN BUILDING). FOR SPARE CONDUITS WITHOUT CONDUCTORS, PROVIDE CAP AT EACH END.
3. ALL CONDUITS (ACTIVE AND SPARE) SHALL SWEEP UPWARD A MINIMUM OF 12" ABOVE THE BASE OF HANDHOLES OR OTHER EXTERIOR STRUCTURES.

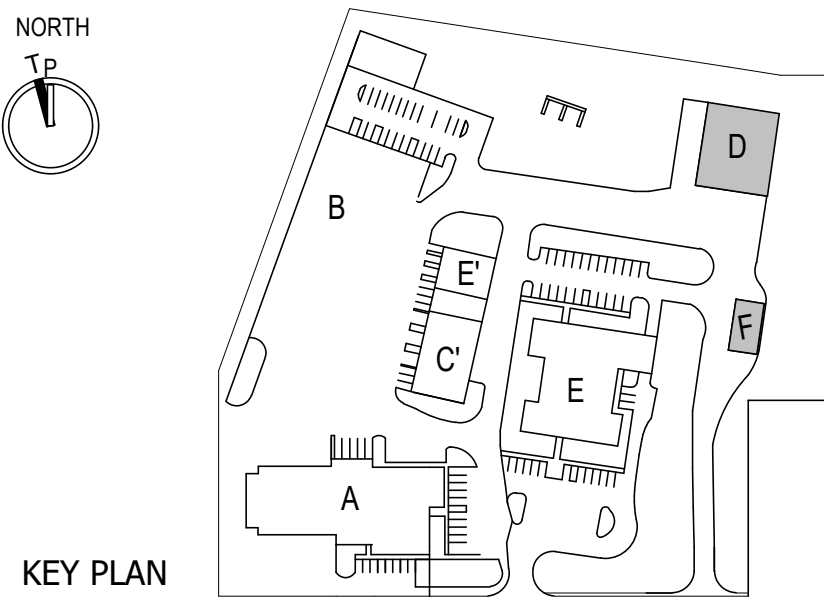


ISSUE DATE

DATE	DESCRIPTION
10/16/2024	BID DOCUMENTS

REVISIONS

DATE	DESCRIPTION
------	-------------



SCALE: AS NOTED



ABINGTON DPW
FACILITY

225 CENTRAL STREET,
ABINGTON, MA 02351

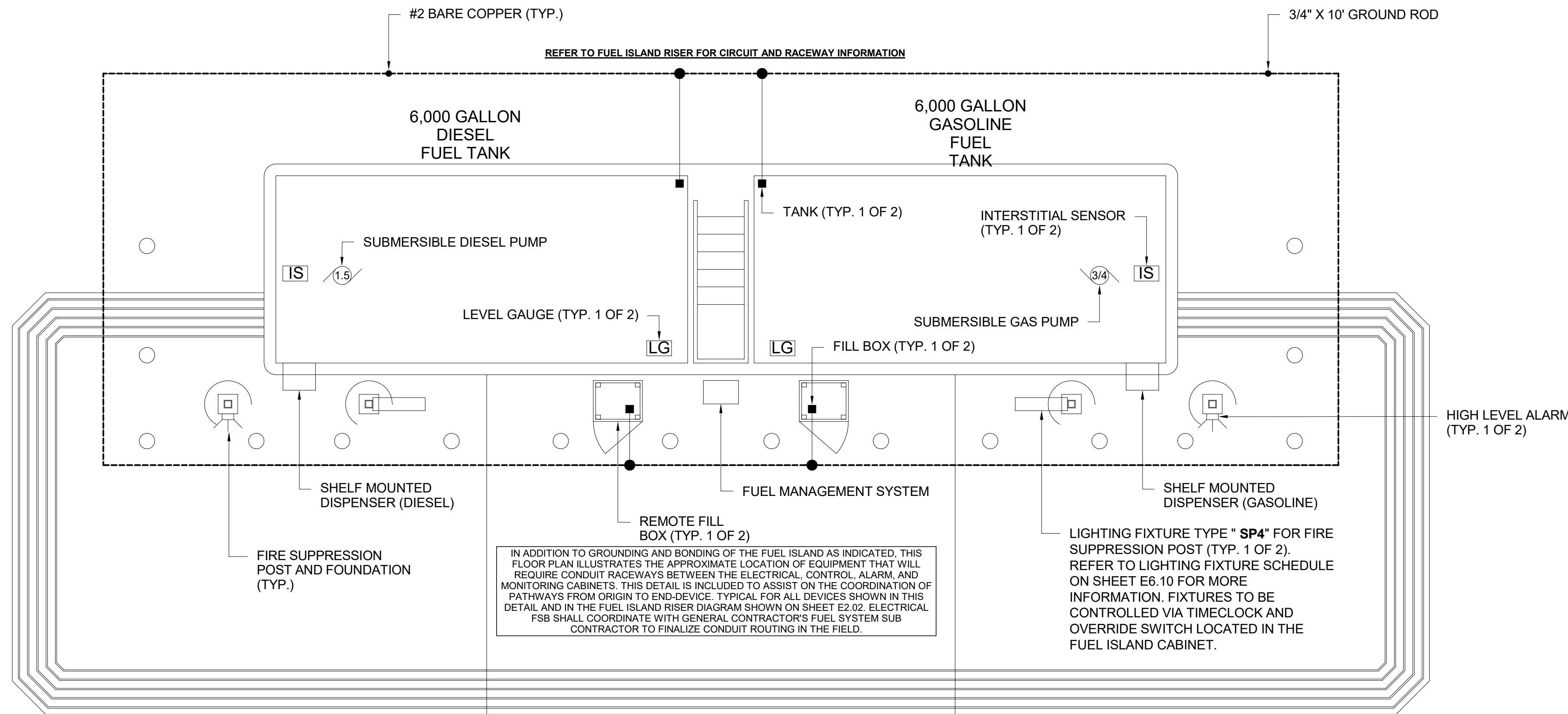
PROJECT NO.: ENG22-0465

DRAWN BY: RNM

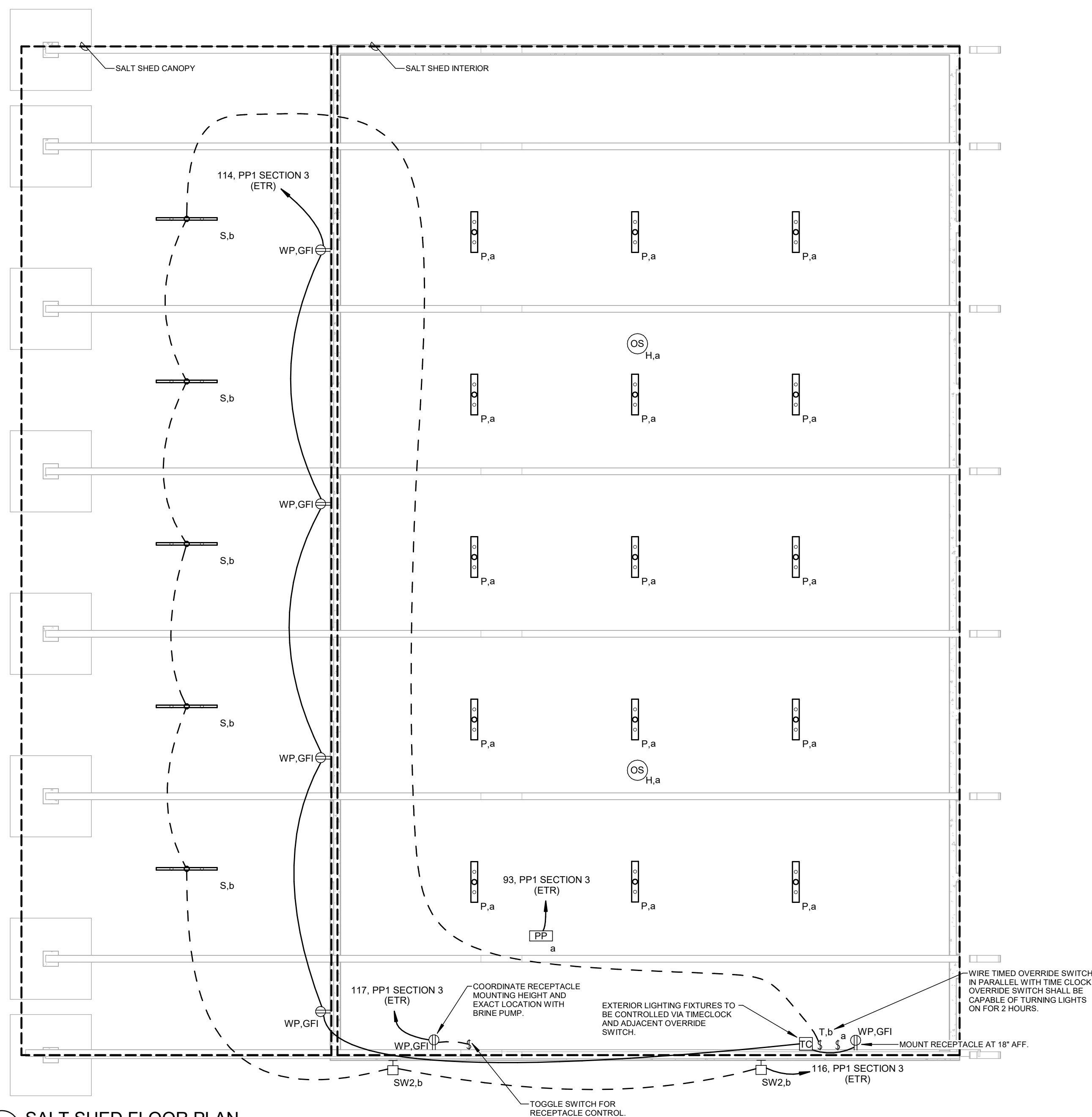
ELECTRICAL
LIGHTING AND
POWER FLOOR
PLAN

DRAWING NO.:

ELP1.00



1 FUEL ISLAND FLOOR PLAN
3/16" = 1'-0"



2 SALT SHED FLOOR PLAN
1/8" = 1'-0"

Weston & SampsonSM

www.westonandsampson.com



Carnegie Row, Ste. 104
Wood MA 02062
261.7161
eng.com
S #2024236.00

ISSUE DATE

VISIONS



KEY PLAN

SALE: AS NOTED



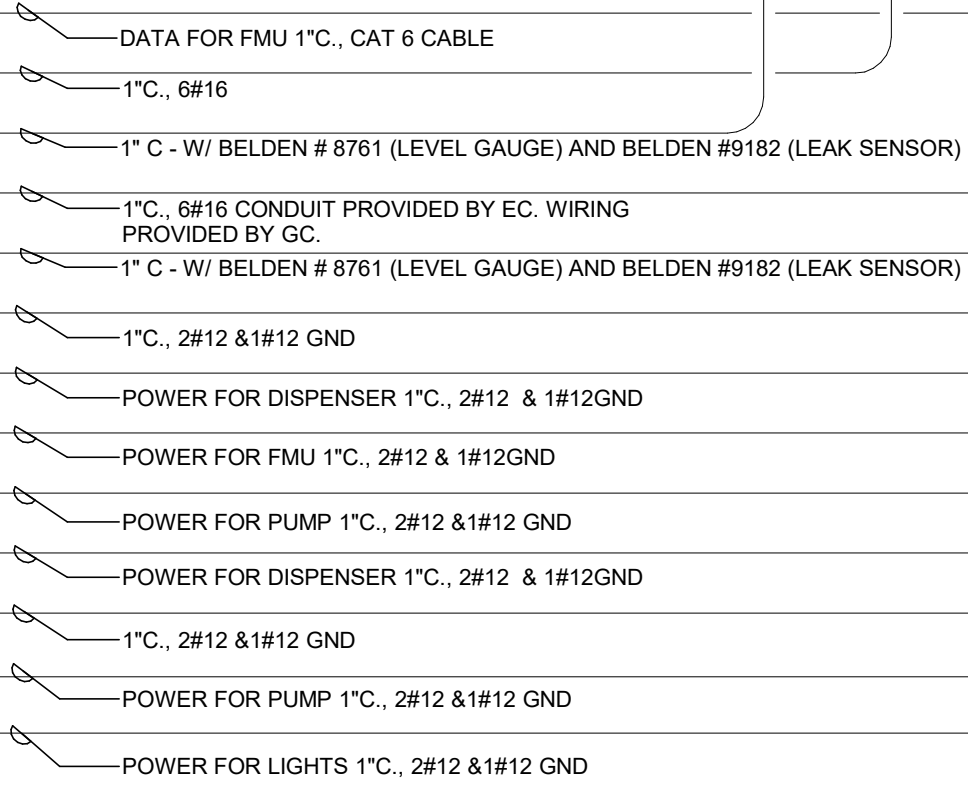
INGTON DPW FACILITY

25 CENTRAL STREET,
BINGTON, MA 02351

DRAWN BY: RNM

ELECTRICAL RISER - FUEL ISLAND

E2.02



1. THIS DETAIL IS A SCHEMATIC AND SHOWS THE GENERAL LAYOUT OF THE FUEL SYSTEM CONDUITS ONLY. THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT, MATERIALS, AND CONDUIT, SEALS, JUNCTION BOXES, E-STOP, WIRING, AND ALL OTHER APPURTENANCES AS NEEDED IN ORDER TO PROVIDE A COMPLETE AND OPERABLE SYSTEM.
2. ALL ABOVE GRADE CONDUITS SHALL BE 1" GALVANIZED RIGID STEEL W/ 3/4" & 1 1/2" AND THIN / THWN STRANDED CONDUCTORS UNLESS OTHERWISE NOTED. ALL BELOW GRADE CONDUITS SHALL BE 1" SCHEDULED 80 PVC W/ 3/4" & 1 1/2" AND THIN / THWN STRANDED CONDUCTORS UNLESS SPECIFIED OTHERWISE.
3. CONTRACTOR SHALL CONFIRM EXACT CONDUIT, WIRING AND EQUIPMENT REQUIREMENTS WITH SPECIFIC EQUIPMENT MANUFACTURERS REQUIREMENTS PRIOR TO INSTALLATION.
4. ALL EMERGENCY SHUTOFFS AND DISCONNECTS WITHIN 20' OF THE FUEL DISPENSING EQUIPMENT SHALL BE INTRINSICALLY SAFE.
5. THE ELECTRIC HEATER SHALL BE 1000 WATTS AND SHALL HELP MAINTAIN A STABLE ENCLOSURE TEMPERATURE DURING THE WINTER MONTH. THE HEATER SHALL HAVE THE FOLLOWING MINIMUM REQUIREMENTS:
 - A. STEEL HOUSING
 - B. BUILT IN THERMOSTAT (RANGE 40° TO 100° F)
 - C. UNIT SHALL BE AS MANUFACTURED BY ELECTRIC KING PART NUMBER U212100 OR APPROVED EQUAL.

1. THE GENERAL CONTRACTOR SHALL PROVIDE THE FOLLOWING:
- A. ABOVE GROUND STORAGE TANKS
 - B. DISPENSERS
 - C. PUMPS
 - D. HIGH LEVEL ALARMS & ACKNOWLEDGEMENT SWITCHES
 - E. LEAK & LEAK SENSORS
 - F. DRY CHEMICAL FIRE SUPPRESSION CONTROL PANEL
 - G. TANK MONITORING CONTROL PANEL
 - H. ANTI SIPHON VALVE AND ALL OTHER FUEL PIPING AND FITTINGS
 - I. ELECTRICAL CABINET (SHOWN ON ELECTRICAL DRAWINGS FOR COORDINATION PURPOSES ONLY)
 - J. LOW VOLTAGE WIRING FOR TANK MONITORING SYSTEM AND FIRE SUPPRESSION SYSTEM AS NOTED IN ONE LINE DIAGRAM
 - K. FUEL MANAGEMENT SYSTEM
 - L. FIRE ALARM CONTROL PANEL, W/ NITROGEN BOTTLE
 - M. LOW VOLTAGE WIRING, INCLUDING "BELDEN-SERIES" WIRING
 - N. FIRE ALARM CONNECTION BETWEEN THE FIRE ALARM CABINET AND THE FUEL ISLAND CABINET, FIRE SUPPRESSION SYSTEM, AND REMOTE STOP BUTTONS
2. THE ELECTRICAL F8B CONTRACTOR SHALL PROVIDE THE FOLLOWING:
- A. FUEL ISLAND ELECTRICAL SUB PANEL WITH SHUNT TRIP MAIN BREAKER
 - B. TIME DELAY OVERRIDE SWITCH
 - C. ELECTRICAL CABINET LIGHT FIXTURE. REFER TO LIGHTING FIXTURE SCHEDULE ON SHEET E6.10 FOR MORE INFORMATION.
 - D. GFCI RECEPTACLE IN ELECTRICAL CABINET FOR CELLULAR MODEM
 - E. GFCI RECEPTACLE IN ELECTRICAL CABINET
 - F. CABINET HEATER, KUNZ PUMPHOUSE HEATER U SERIES; MODEL U12100, U2100P12009.
 - G. ESCOP AND FIRE SUPPRESSION SWITCH
 - H. CANOPY LIGHTING
 - I. ELECTRICAL GROUNDING FOR TANKS AND FUEL ISLAND EQUIPMENT PER NFA 70E
 - J. ALL JUNCTION BOXES AS INDICATED IN THIS DETAIL
 - K. ALL WIRING SHALL BE CONDUIT RUN TO THE EQUIPMENT. THE COMPLETE INSTALLATION SHALL BE 1" MINIMUM UNLESS NOT OTHERWISE SPECIFIED.
 - L. POWER CONNECTIONS TO ALL EQUIPMENT AS INDICATED IN THIS DETAIL VIA #12-1+12/30, 3/4" OR LESS NOTED OTHERWISE.
 - M. POWER PROOF CONDUIT AND FITTINGS
 - N. RECEPTACLE FOR CELLULAR MODEM
 - O. CATEGORY 1 CABLEING AS INDICATED IN THIS DETAIL
 - P. ALL POWER WIRING AND CIRCUIT WIRING INDICATED IN THIS DETAIL.

*CELLULAR MODEM AND ASSOCIATED SUBSCRIPTION TO BE PROVIDED BY THE OWNER.

1 FUEL ISLAND RISER DIAGRAM
NTS

LIGHTING FIXTURE SCHEDULE				
TYPE	BASIS OF DESIGN MANUFACTURER / MODEL	VOLTAGE	SOURCE	FIXTURE DESCRIPTION - BASIS OF DESIGN
P	ORION / VTSS1 VTSS14A1UNVFD8CS-KPFG-HW	UNV	3475LM, 25W 3500K LED	4' PENDANT MOUNTED LINEAR LED LIGHTING FIXTURE: STEEL CONSTRUCTION WITH IMPACT RESISTANT POLYCARBONATE LENS; 80 CRI; INTEGRATED 0-10V DIMMING DRIVER; L70 AT 155,000 HOURS; IP66 RATED; NEMA4X RATED. PROVIDE ACCESSORY "HW-FC008" SUSPENDED MOUNTING KIT
S	LITECONTROL / FLOW 91L 91L-P-D-3-STD-6-06-SOF-COLOR-30K-D070-D01-1C-UNV-H72	UNV	2800LM, 30.8W 3000K LED	6' PENDANT MOUNTED LINEAR LED LIGHTING FIXTURE: ALUMINUM HOUSING WITH ACRYLIC DIFFUSER; 80 CRI; INTEGRATED 0-10V DIMMING DRIVER; L85 AT 50,000 HOURS; WET LOCATION RATED. COLOR: TO BE SELECTED BY THE ARCHITECT.
SP4	BEACON / VIPER VP-ST-1-36L-55-3KT-FR-UNV-COLOR-BC	UNV	7500LM, 55W 3000K LED	SITE LIGHTING FIXTURE WITH SINGLE HEAD MOUNTED TO 14 FOOT POLE; ALUMINUM HOUSING WITH FIELD ROTATABLE OPTICS; 70 CRI; TYPE 4 FORWARD DISTRIBUTION; INTEGRATED 0-10V DIMMING DRIVER; BACKLIGHT CONTROL; IP65 RATED. COLOR: TO BE SELECTED BY THE ARCHITECT.
SW2	BEACON / GEOPAK SERIES 2 TRP2-36L-55-3KT-4W-UNV-COLOR	UNV	4200LM, 63W 3000K LED	EXTERIOR MOUNTED WALLPACK MOUNTED AT 17 FEET AFG; ALUMINUM CONSTRUCTION; 70 CRI; TYPE 4W DISTRIBUTION; INTEGRATED 0-10V DIMMING DRIVER; IP66 RATED. COLOR: TO BE SELECTED BY THE ARCHITECT.
T	HUBBELL / VAPORTITE VWGL-2	UNV	2673LM, 20W 4000K LED	WALL MOUNTED LED LIGHTING FIXTURE FOR FUEL ISLAND CABINET; DIE-CAST ALUMINUM HOUSING WITH REMOVABLE WHITE ALUMINUM GUARD AND FROSTED GLASS LENS; 80 CRI; L70 AT 127,000 HOURS+; IP66 RATED.
NOTES: 1. LIGHT FIXTURES IN THE SCHEDULE SHALL BE CONSIDERED BASIS OF DESIGN. EQUAL FIXTURE SUBSTITUTIONS ARE ACCEPTABLE FOR ALL FIXTURES IN THE LIGHTING FIXTURE SCHEDULE, UNLESS INDICATED OTHERWISE. EQUAL FIXTURE APPROVAL SHALL BE AS JUDGED BY THE ENGINEER AND THE ARCHITECT. IN ADDITION TO THE REQUIREMENTS LISTED IN THE LIGHTING FIXTURE SCHEDULE AND IN THE SPECIFICATIONS, THE PROPOSED EQUAL FIXTURES SHALL: A. BE THE SAME GENERAL SIZE, STYLE AND SHAPE, INCLUDING BUT NOT LIMITED TO LENS CONSTRUCTION AND SHADING. B. BE OF EQUAL QUALITY CONSTRUCTION AND FINISH. C. BE SUPPLIED WITH ALL REQUIRED ACCESSORIES TO MATCH THE SPECIFIED (BASIS OF DESIGN) FIXTURE. D. PROVIDE THE SAME DISTRIBUTION, EFFICACY AND SOURCE LUMEN OUTPUT. E. HAVE THE SAME LISTINGS AS THE BASIS OF DESIGN FIXTURE, INCLUDING DLC AND ENERGY STAR QUALIFICATIONS. 2. ALL FIXTURES SHALL BE UL LISTED. 3. ALL NECESSARY MOUNTING HARDWARE, HANGERS, BRACKETS, RAILS, YOKES, CANOPIES, STEMS, CHAINS, ROW JOINERS, ETC. SHALL BE FURNISHED AND INSTALLED. 4. REFER TO ARCHITECTURAL DRAWINGS FOR SPECIFIC DETAILS, ARRANGEMENT, MOUNTING HEIGHTS, SUSPENSION LENGTHS, CEILING CONSTRUCTION, ETC. ALL COLORS AND FINISHES SHALL BE SELECTED BY ARCHITECT. 5. FIXTURES SHALL BE SERIOUSLY SUPPORTED AS REQUIRED BY THE APPLICABLE BUILDING CODE. FIXTURES SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE AND SHALL BE INDEPENDENT OF DUCTS, PIPES, CEILINGS AND THEIR SUPPORTING MEMBERS. FIXTURES SHALL BE SUPPORTED WITH A MINIMUM OF 2 SUPPORTS. 6. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. 7. UNLESS OTHERWISE NOTED, PENDANT FIXTURE MOUNTING HEIGHTS IN FINISHED SPACES SHALL BE AS FOLLOWS: A. CEILING HEIGHT 9'-0" OR LOWER: 7'-6" TO BOTTOM OF FIXTURE B. CEILING HEIGHT 9'-6" TO 11'-0": 8'-0" TO BOTTOM OF FIXTURE C. CEILING HEIGHT 11'-0" TO 12'-0": 9'-6" TO BOTTOM OF FIXTURE D. MINIMUM PENDANT LENGTH SHALL BE 1'-0" E. CONSULT WITH ARCHITECT AND ENGINEER FOR OTHER CEILING HEIGHTS.				

Branch Panel: NEDP (ETR)											
Location: ELECTRICAL CLOSET 1171				Volts: 120/208 Wye			A.I.C. Rating: 42 KAIC				
Supply From: EXISTING				Phases: 3			Bus Material: CU				
Mounting: Surface				Wires: 4			Bus Rating: 800 A				
Enclosure: Type 1				MCB Rating / MLO: 800A MCB							
CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT	
1	EXISTING LOAD	60 A	3	5.00	--		1	--	SPACE	2	
3	--	--	--		5.00	--	1	--	SPACE	4	
5	--	--	--			5.00	--	1	--	SPACE	6
7	* FUEL ISLAND SUBPANEL	100 A	3	4.20	--		1	--	SPACE	8	
9	--	--	--		2.07	--	1	--	SPACE	10	
11	--	--	--			3.52	--	1	--	SPACE	12
13	EXISTING LOAD	200 A	3	19.00	15.00		3	200 A	EXISTING LOAD	14	
15	--	--	--		19.00	15.00	--	--	--	16	
17	--	--	--			19.00	15.00	--	--	18	
19	SPACE	--	1	--	19.00		3	225 A	EXISTING LOAD	20	
21	SPACE	--	1		--	19.00	--	--	--	22	
23	SPACE	--	1			--	19.00	--	--	24	
25				20.00			3	300 A	EXISTING LOAD	26	
27						20.00	--	--	--	28	
29							20.00	--	--	30	
		Phase Load:		82.20 kVA	80.07 kVA	81.52 kVA					
		Phase...		686.9 A	667.3 A	681.2 A					
		Total Load:		243.79 kVA							
		Total Amps:		676.69 A							
Notes: EXISTING BREAKER ON CKT 26 ALSO OCCUPIES SPACES 25 THROUGH 29. * INDICATES TO USE EXISTING SPARE BREAKER LOCATED IN PANELBOARD ON THIS CIRCUIT.											

Branch Panel: PP1 SECTION 3 (ETR)											
Location: ELECTRICAL CLOSET 1171 Supply From: PP1 SECTION 2 Mounting: Surface Enclosure: Type 1					Volts: 120/208 Wye Phases: 3 Wires: 4			A.I.C. Rating: EXISTING Bus Material: CU Bus Rating: 225 A MCB Rating / MLO: MLO			
CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT	
85	EXISTING LOAD	20 A	1	0.18	0.36		1	20 A	EXISTING LOAD	86	
87	EXISTING LOAD	20 A	1		0.36	0.18	1	20 A	EXISTING LOAD	88	
89	EXISTING LOAD	20 A	1			0.36	0.50	1	20 A	EXISTING LOAD	90
91	EXISTING LOAD	20 A	1	0.50	0.50		1	20 A	EXISTING LOAD	92	
93	* LTG - SALT SHED INTERIOR	20 A	1		0.38	0.36	1	20 A	EXISTING LOAD	94	
95	EXISTING LOAD	20 A	1			0.36	0.36	1	20 A	EXISTING LOAD	96
97	EXISTING LOAD	20 A	1	0.50	0.50		1	20 A	EXISTING LOAD	98	
99	EXISTING LOAD	20 A	1		0.50	0.50	1	20 A	EXISTING LOAD	100	
101	EXISTING LOAD	20 A	1			0.50	0.36	1	20 A	EXISTING LOAD	102
103	EXISTING LOAD	20 A	1	0.50	0.36		1	20 A	EXISTING LOAD	104	
105	EXISTING LOAD	20 A	1		0.36	0.50	1	20 A	EXISTING LOAD	106	
107	EXISTING LOAD	20 A	1			0.50	0.50	1	20 A	EXISTING LOAD	108
109	EXISTING LOAD	20 A	1	0.36	0.36		1	20 A	EXISTING LOAD	110	
111	EXISTING LOAD	20 A	1		0.50	0.50	1	20 A	EXISTING LOAD	112	
113	EXISTING LOAD	20 A	1			0.50	1.40	1	20 A	* RCPT - SALT SHED	114
115	EXISTING LOAD	20 A	1	0.36	0.47		1	20 A	* LTG - SALT SHED EXTERIOR	116	
117	* RCPT - SALT SHED	20 A	1		0.18	0.36	1	20 A	EXISTING LOAD	118	
119	SPARE	20 A	1			0.00	0.36	1	20 A	EXISTING LOAD	120
121	EXISTING LOAD	20 A	1	0.36	0.36		1	20 A	EXISTING LOAD	122	
123	EXISTING LOAD	20 A	1		0.50	0.50	1	20 A	EXISTING LOAD	124	
125	EXISTING LOAD	20 A	1			0.50	0.50	1	20 A	EXISTING LOAD	126
		Phase Load:		5.65 kVA	5.66 kVA	6.70 kVA					
		Phase...		47.1 A	47.2 A	55.8 A					
		Total Load:		18.00 kVA							
		Total Amps:		49.98 A							
Notes: * INDICATES TO USE EXISTING SPARE BREAKER LOCATED IN PANELBOARD.											

Branch Panel: FISP													
Location: FUEL ISLAND ELECTRICAL CABINET Supply From: NEDP (ETR) Mounting: Surface Enclosure: Type 1					Volts: 120/208 Wye Phases: 3 Wires: 4			A.I.C. Rating: 42 KAIC Bus Material: CU Bus Rating: 100 A MCB Rating / MLO: 60A MCB (SHUNT TRIP)					
CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	LTG - FUEL ISLAND	20 A	1	0.11	1.00					1	15 A	CABINET HEATER	2
3	GAS DISPENSER	20 A	1			0.25	0.56			1	15 A	DIESEL DISPENSER	4
5	DIESEL SUBMERSIBLE PUMP	20 A	2					1.14	0.73	2	20 A	GAS SUBMERSIBLE PUMP	6
7	--	--	--	1.14	0.73					--	--	--	8
9	LEVEL GAUGE	20 A	1			0.24	0.24			1	20 A	LEVEL GAUGE	10
11	FUEL MANAGEMENT UNIT	20 A	1					0.29	0.36	1	20 A	GFI RCPT - FUEL ISLAND CABINET	12
13	LTG - FUEL ISLAND CABINET	20 A	1	0.02	0.80					1	20 A	FIRE ALARM CONTROL PANEL	14
15	GFI RCPT - FUEL ISLAND CABINET	20 A	1			0.18	0.40			1	20 A	TANK MONITORING PANEL	16
17	PUMP HANDLE DETECTION	20 A	1					0.50	0.50	1	20 A	PUMP HANDLE DETECTION	18
19	ANTI-SIPHON VALVE	20 A	1	0.20	0.20					1	20 A	ANTI-SIPHON VALVE	20
21	FUEL CABINET TIMECLOCK	20 A	1			0.20	0.00			1	20 A	SPARE	22
23	SPARE	20 A	1					0.00	0.00	1	20 A	SPARE	24
25	SPARE	20 A	1	0.00	0.00					1	20 A	SPARE	26
27	SPARE	20 A	1			0.00	0.00			1	20 A	SPARE	28
29	SPARE	20 A	1					0.00	0.00	1	20 A	SPARE	30
31	SPARE	20 A	1	0.00	0.00					1	20 A	SPARE	32
33	SPARE	20 A	1			0.00	--			1	--	SPACE	34
35	SPACE	--	1	--	--			--	--	1	--	SPACE	36
37	SPACE	--	1	--	--					1	--	SPACE	38
39	SPACE	--	1	--	--	--	--			1	--	SPACE	40
41	SPACE	--	1	--	--			--	--	1	--	SPACE	42
		Phase Load:		4.20 kVA	2.07 kVA	3.52 kVA							
		Phase...		36.9 A	17.3 A	31.2 A							
		Total Load:		9.79 kVA									
		Total Amps:		27.17 A									
Notes: REFER TO FUEL ISLAND RISER DIAGRAM FOR CONDUIT SIZING.													

